The essential guide for all Atari computer users

Issue 6 October 1995 £3.25

ATARI World

INSIDE THE ST

The defintive guide – what's inside your machine

Ground breakers

New series on software that's a step ahead

Apex stays on top

Check out the latest upgrade with our exclusive special offer

Larger than life

Create eye-catching posters and banners in ST Source

Serial Killer

Communications gets the Atari Pro treatment

Reviews

Alien Thing ● Sprite Works 2.0 ● Gemulator 4.0 ● Pinball Ultimate Arena ● Mastering Papyrus ● Super Burnout ● Unicentre

9 771357 952021 10

System Solutions

Company of the Year 1994

The Complete Direct to Disk System

Get a complete 8 track Direct to Disk recording system from as little as £39 a week.

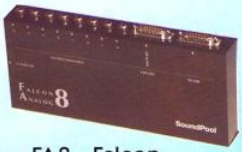
NOVA Retail Finance

Ask for a written quotation.

Best Hard Drive 1994

1Gb, 1.7Gb, 4.3Gb MiniS Hard Drives

Audio Tracker Wave-form Editor



FA8 ~ Falcon
8 Audio Outputs
£349 inc. VAT

FDI ~ Falcon
Digital Interface
£239 inc. VAT

NEW Audio Tracker

8 track digital recording for the Falcon 030 with only 4Mb of memory! Audio Tracker uses internal IDE drives, external SCSI drives and is fully FDI and FA8 compatible. The Recorder features MTC and audio sync, punch in/out, pre-roll, locators, song pointers, digital mixdown, sample rate conversion and audio file import/export for AIF and AVR files.

The Wave Editor allows non destructive editing using sample accurate markers and a powerful mixer and effects unit is included. Audio Tracker is ideal for video sound production, background music and voice-overs, as well as conventional multi-track recording.

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Ask for your personal quotation. Tailoring systems to your requirements is our speciality.

Designed, colour-separated and photoset using DA's Layout on Atari Computers

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NVDI 3

The fastest display accelerator now comes with the Speedo and TrueType scaleable font system. NVDI 3 has highly optimised code, faster than the original. Get a faster display, comfortable font handling and faster printing for all programs using GDOS or SpeedoGDOS. Now you can use all those classic TrueType fonts from the PC or Macintosh.

NVDI v3.0 including 8 Speedo fonts	£49.95
100 TrueType fonts on disk	£39.95
500 TrueType fonts on CD-Rom	£49.95

For update pricing, please phone.

NVDI v2.5 will continue to sell for only £29.95
Best Software Upgrade 1993 & 94 - **ST Review.**

MagiC

"If you want a multitasking system that works simply and reallably, then MagiC is for you."
ST Review, June 1994.

MagiC is a full TOS replacement; a very fast disk filing system; has accelerated serial, MiDi and printing routines and is, of course, a true pre-emptive multitasking system. **MagiC Desk**, a replacement Desktop, and a powerful command shell are included. **MagiC** runs on ST, Mega and TT computers with 512Kb, but 2Mb is recommended for a useful working system. The Falcon version is expected to be available by July 1995.

"It's like running an accelerator and getting the multitasking thrown in for free."
ST User, February 1994

NB: Excellent with Calamus SL. Compatible with Notator Logic, but not with Notator SL and not yet compatible with Cubase.

MagiC	(RRP £69.95)	**Intro Price £59.95**
MagiC and Ease		£79.95
MagiC and Kobold	**Still Only**	£79.95
MagiC, Ease and Kobold		£119.95
MagiCMac and Ease		£149.00

PAK68/3

Turn your computer into a 32bit system with the PAK68/3 and a 68030 processor. The 32MHz clock, 32bit wide TOS and a 32Kbyte cache will accelerate your system by 775% (Gembench 3.10). This is faster than the Falcon and the TT! Clock speeds of 40 and 50Mhz are possible. The use of recycled processors makes this upgrade very affordable without sacrificing reliability.
A 32bit 128Mb FastRam board and a 24bit colour graphics card are now available.

PAK68/3 board only, no CPU	£249.00
PAK68/3, 33MHz CPU, TOS 2.06 req.	£299.00
PAK68/3, 33MHz CPU and TOS 3.06	£359.00
PAK68/3, 33MHz CPU & FPU and TOS3.06	£399.00

Please telephone to discuss your requirements.

Kobold

This High Speed File Manager gives unbelieveable speed. Copies 1000 files (10Mb) in 45sec (GEMDOS 5:35min!). Use Kobold for backing up; formatting floppies (DD,HD,ED); move, copy and delete files; use the learn function to automate repetitive jobs. Ease calls Kobold automatically for all desktop file and floppy operations.

Kobold 2.5 (RRP £59.95) **Still Only** £39.95

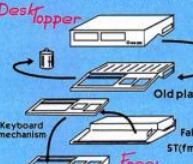
Ease

ST FORMAT Awarded 97%

Use your Atari with EASE. Replace the old Atari Desktop. This program could not be more appropriately named. The right click replaces the double click. Iconize windows for instant access to groups of files. Ease is aware of multitasking and comes with a sophisticated Colour Icon Editor. Works on any ST, all TOS versions, and with any display and graphic card.
Ease (RRP £49.95) **Still Only** £39.95

DeskTopper

No space for accelerators, TOS boards, hard disks, graphic cards and PC emulators? Convert your Atari into a desktop computer with more space. Simply replace your plastic top with the DeskTopper and fit your keyboard into FreeKeys (or replace with a PC Keyboard using AT-Key). For more information, ask for the DeskTopper leaflet.



Desk Topper - ST(FM/e)/Falcon	£69.95
FreeKeys	£39.95
Desktopper and Freekeys	£99.95
AT-Key	£49.95
Cherry Keyboard	£29.95
Desk Topper & FreeKeys	£99.95

T28 & T28e

Tired of waiting for your computer? Then speed it up with a 28Mhz processor. The T28 accelerator is now available for STe and STFM computers. Compatible with Cubase and Notator Logic. Available Now: The MultiBoard, a TOS2.06 IDE and graphic adaptor with 2-8Mb memory expansion.

T28 - with 64Kb cache for STFM/MegaST	£179.00
T28e - with 64Kb cache for STe	£199.00
MultiBoard	£149.00
24bit Graphics Card	£149.00

SCSI Drives

Best Hard Drive 1994 - **ST Review Christmas '94**
MiniS hard drives are full SCSI systems, hardware compatible with all Atari, Amiga, Mac and PC computers. They are unrivalled in size, low noise, speed and style. The ST(FM/e) version now comes with the ICD Link II as standard, or choose the Translator with HD Driver. Also included are terminators and all required cables.
We will match prices but won't compromise quality
Gold Award of 93% - **ST Format Feb. '94**
Essential Buy of 92% - **ST Review Christmas '93**

★ Quiet fan ★ Internal Power Supply 100-240V
★ 2 Year Warranty ★ Small (2.5x6x8.5") (WxHxD)
★ Dual SCSI Port ★ Device Number Switch

		TT/Falcon	ST(FM/e)
80Mb	IBM	£139.00	£189.00
127Mb	Quantum	£199.00	£249.00
270Mb	Quantum	£219.00..	£269.00
540Mb	Quantum	£279.00	£329.00
730Mb	Quantum	£309.00	£359.00
850Mb	Quantum	£359.00	£409.00
1Gb	Connor	£449.00	£499.00
2Gb	Connor	£799.00	VAT included!

Look: Bundle Kobold with any drive for £24.99

CD-Roms

NEW **Toshiba 4x Speed CD Rom drive systems : for the Falcon with SCSI II Cable, or TT £249.00**
for the ST(FM/e) with the ICD Link II £299.00

Get a free Mega Archive CD with every CD Rom drive - first 100 orders only.

★ Multi-session Drive ★ Photo CD compatible
★ Quad Speed ★ No caddies ★ Plays Music CDs
★ Dual SCSI port ★ Headphone socket with Volume control ★ Stereo Phono connectors

ExtenDOS Pro v2 with Audio Player	£39.95
Bundled with drive	£29.95
NEW Atari Mega Archive, Volume 2	£24.95
Gemini (Atari PD/Shareware) (US)	£24.95
Alpha/Whiteline - PD/Shareware	£39.95
Suzy B American PD/Shareware (2 CD's)	£49.95
Publisher's Source - Background photos	£19.95
Bingo, WOW! and Publishers Source	£39.95

SyQuest

NEW SyQuest removable media offers fast and secure storage. Ideal for backing up, or as a main drive. Imagine all your music files and software on one cartridge, and all your DTP files on another.

105Mb Drive, 14.5ms, Inc. 1 cartridge	£369.00
270Mb Drive, 13.5ms, Inc. Cartridge	£499.00
105Mb / 270Mb Cartridge	£49.95 / £59.95
230Mb Magneto Optical Drive	£799.00
128Mb / 230Mb MO Cartridge	£29.95 / £49.95

MAIL ORDER,
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Fax: (01753) 830344
(01753) 832212

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London, SE22 8RS
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(0181) 693-3355

Prices include VAT and may change without notice - UK P&P £3.95 - Multiple or large items, add £10 courier. E&OE

With two service centres and Atari trained engineers at your service, the Atari Workshop is now Atari UK's preferred and recommended service agent. Need it back in a hurry? Ask for our next day ProService. Call us for estimates and to discuss your upgrade requirements. We fit all quality upgrade products. Ask for our Courier collection and delivery.

Call Windsor on (01753) 818816, or London on (0181) 693-1919.

ATARI WORKSHOP

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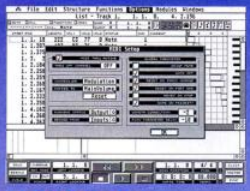

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Back on course

After our leisurely summer special, we're back to being serious again. In the Pro section you can dream about being an online anorak and joining the ever-growing band of people who are getting online and discovering the joys of the Internet. There's even an in-depth article showing you how to get more throughput from your serial port but if it's all a bit over your head, in a month or two we'll be giving comms the ST Source treatment.

In ST Source this month we've answered one of the questions we're asked most - how to get big, bold headlines and text on a page with a minimum of effort.

The popular PD section has been redesigned this month too - Joe Connor is now the man in charge and he presents his first new look PD Arena (expanded to eight pages) on page 81. It's our aim to cover more programs than ever before - so you can make informed choices about the disks you're going to order.

In our features section, you can read all about Freedom, the outstandingly complex file selector replacement, in our new Ground Breakers series. There's also an amazing image processing competition - come up with a really good image or graphic design and you could get it turned into a poster - free! And for Falcon owners there's a look at the latest version of Apex. If it sounds good you can also get £20 off in our special offer.

Get down to it - I do hope you enjoy it.

Andrew Wright, Editor

Don't miss the November issue on sale Oct 20th

SNIPPETS

◆ Tony Gooding, the highly talented artist behind Silly Software's Grafix package and other titles, has decided to leave the outfit. The result is that their forthcoming game Percy P'Nut has been put on hold until they find a replacement artist. Interested parties should contact James Matthews at Top Byte Software on 01622 763056.

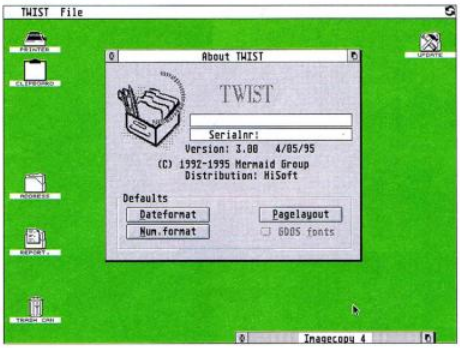
◆ *Atari Days is the followup to a highly successful event that took place in Italy last December. It is a three day Atari specific show organised by Emmesoft, a major distributor of Atari software and hardware in Italy since 1985. New products on show will include the Medusa, the Eagle, C-Lab Falcon MK I & II, Lithos Scan (a software driver for Agfa scanners which includes direct to disk scanning), Falcon FX (a new multi-board) and Karaoke Voice Wizard (a new release from Jurgen Schwietering of Steinberg fame).*

There will also be dedicated workshops on graphics, Midi and multi-media, as well as a chance to "talk" with representatives of the Independent Association of Atari Developers in a direct Internet link up. Atari Days takes place in Torino, Italy from 10th to 12th November. For further details, contact Emmesoft, Via S. Donato 49, 10144 Torino, Italy; Tel: +39 11 484309.

◆ ST News has entered its second decade with the release of issue 10.1. This popular disk magazine is non-profit making and covers all aspects of Atari computing as well as a number of general interest topics such as film, video and music reviews, reports from recent European pop concerts and such like. The last few issues have been fully Falcon compatible and accordingly the Falcon and Jaguar also get a fair bit of coverage nowadays. ST News is available from most PD Libraries as well as a number of ftp sites. Ftp to src.doc.ic.ac.uk and you'll find it at /packages/atari/umich /magazines/diskmags/stnews/, but be warned, each issue is over 1Mb in size!

News

Let's Twist Again



Twist is here. And version 3 too.

HiSoft (01525 718181) has announced the immediate availability of Twist 3, the long awaited upgrade to their popular database. Quite a number of enhancements have been made to the product, the most notable of which is the incorporation of full GDOS support. Twist 3 is now compatible with all versions of GDOS up to and including SpeedoGDOS 5 and NVDI 3, resulting in a more professional output for printed reports.

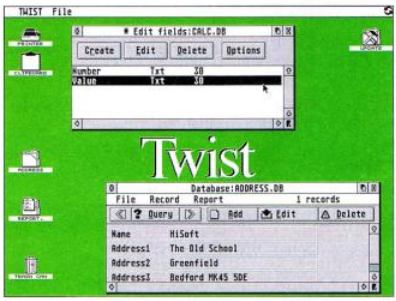
Tied in with the GDOS support is a much improved text editor which has a similar feel to Papyrus. It supports the use of tabs, paragraph tagging, different text styles and, of course, multiple fonts.

The use of indexing in list mode is a major feature of the upgrade. It allows you to pipe the index field so as to narrow down searches. For example, to locate a Smith in the database, you would type "s" to find all names starting with that letter, followed by "m" or "mi" to narrow it down further. This function is particularly fast in operation. Another new feature is the support of user defined sizes in dialogue boxes. When entering a parameter or variable, you can create your own custom dialogue box to suit.

"I've heard people say that we're not supporting the Atari platform any more," said HiSoft boss David Link. "It's just not true and this will demonstrate that we're still bringing quality products to the market. Some products have reached the end of their useful life but we'll continue to support the ones that are still being developed and improved."

Twist 3 is available now for £89.95. Existing users of Twist 2 can upgrade by returning their master disk to HiSoft along with an upgrade fee of £19.95.

HiSoft has recently taken delivery of its first batch of Iomega Zip drives (see news item in issue 5). The Zip 100 drive costs £179 and comes complete with an 100Mb cartridge, all necessary leads and HiSoft's custom written Atari Zip Tools, allowing you use it on any Atari computer. Additional 100 Mb data cartridges are also in stock at a cost of £15.95 each.



Twist uses all the Atari operating system's best features.

The X-Files

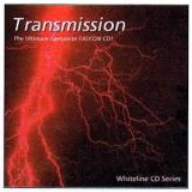
System Solutions (0181 6931919) has recently released the Atari version of Linux on CDR (re-writable CD). Linux is a Unix emulator for micro computers and is already in wide-spread use on the PC. Atari Linux comes complete with X-Windows v6, the native GUI based interface used on modern Unix machines.

The availability of Linux for TOS based computers is a major step forward as there are freely available sources to X-Windows ports of some of the best modern software, which will merely require to be recompiled under the Atari version of Linux. The distribution CD comes complete with the necessary library routines for Atari machines, effectively taking most of the work out of these conversions.

A popular X-Windows program which immediately springs to mind is Netscape, the industry standard World Wide Web browser, although there are countless other equally tempting applications available. Linux requires its own partition on your hard drive, although it can also access TOS drives, allowing for the easy transfer of files between TOS and Linux partitions.

Atari Linux comes complete with both colour and mono resource files as well as an easy to use English installation program. As well as the obvious CD ROM drive, Linux requires an 030 processor and an FPU, so is only suitable for a TT or Falcon with an FPU fitted. Minimum memory requirements are 4Mb of RAM and space for a separate Linux partition of at least 16Mb on your hard drive. Atari Linux is available now and costs £49.95.

Also new on the CD ROM front from System Solutions is a compilation of Falcon specific PD and shareware games and demos. The CD is called Transmission and is available now at a cost of £24.95.



System Solutions' Falcon only CD ROM - full review next month.

Is Linux only for Unix anoraks? Find out next month in Atari World!

HP hits a 600

Hewlett-Packard has announced a brand new entry level Deskjet 600 model to replace the Deskjet 540 launched only a few months ago. The colour capable model features 600 by 600 dpi monochrome resolution and 600 by 300 dpi colour. New inks and print head design mean it can print slightly faster (four pages a minute for monochrome and one page per minute in colour) and onto a wider rang of media, including A5 paper, envelopes, transparencies, labels and stock card.

Although most Atari software won't be able to use the high resolution, the Deskjet 600 is fully backward compatible with older Deskjets so programs like Timeworks 2 and Imagecopy will still be able to print to the 600 as if it were a 500 series model. It comes with a three year warranty and the RRP is £289 ex VAT.

Have *you* got news for *us*?

Your favourite magazine is always in need of help. If you have a news story of note, why not get in touch with us? We can spread the word to thousands of other Atari enthusiasts all over the world. What's more, if you fancy yourself as a writer, you could even write the stories yourself? We pay standard rates for good news stories and are always happy to discuss longer features and reviews. Write to the editor at the address on page 98 or telephone Atari World editorial on (01780) 55604.

SNIPPETS

◆ It's All Relative has announced the immediate availability of four Falcon-specific CD ROMs. They cover US Navy and Marine Aircraft, US Marine Corps, US Airforce Aircraft and US Navy Ships. Each CD features 500 true colour images complete with narration and costs $19.99. You will need a TV or RGB monitor to make full use of these CDs. ST and TT owners (as well as Falcon owners with VGA monitors) will be able to access the images via GEM-View or Imagecopy, although they will of course lose the narration. Contact It's All Relative, 2233 Keeven Lane, Florrisant, MO 63031, USA.

◆ *US Atari hardware specialist Wizztronics has announced details of a planned Falcon accelerator called The Hawk. It uses a Motorola 68030 processor operating at speeds from 33 MHz to 48 MHz, includes an onboard video accelerator and offers enhanced video modes up to 896 by 512 in 256 colours and 448 by 512 in true colour mode. The 128K cache is expandable to 256K and the board can take up to 64Mbs of 32-bit RAM using standard SIMMs. Wizztronics claims the accelerator will be 100% compatible with existing software. The price is expected to be around US$725 but no UK distributor has yet been named.*

◆ Gribnif Software has announced new upgrades to NeoDesk 4 and Geneva. New features include different icons for hard disks, faster program loading, shadowed text, support for the XACC and AV server protocols (drag and drop between applications), and support for the Kobold disk and file management utility. Upgrades for existing users cost $5 (though the patch programs can be downloaded free from online networks like CompuServe) through Gribnif's UK distributors Compo on 01487 773582.

Apex tumbles!

Titan Designs (0121 693 6669) has announced an upgrade to its spectacular Falcon graphics and animation package, Apex Media, as well as a major price cut. With immediate effect, Apex Media has been reduced to £99, but there's even better news to come. Atari World readers can save a further £20 when ordering using the promotional coupon from this month's issue.

Apex is currently at v2.13 and has undergone a number of enhancements since the original release (v2.00). These include improved ScreenEye and Exposé digitiser support, an increase in the maximum canvas size to 4096 by 3072 pixels, improved compatibility with FLC and TGA files, playback speed now written to FLI/FLC/FLH animations, faster saving of TGA files, improved compatibility with screen resolution boosters and a number of smaller fixes. Existing owners can upgrade to v2.13 by returning their Apex install disk and example disks along with their registration card and an upgrade fee of £10 (£12 for overseas customers) to Titan Designs.

Apex Media

Syquest Hits Back!

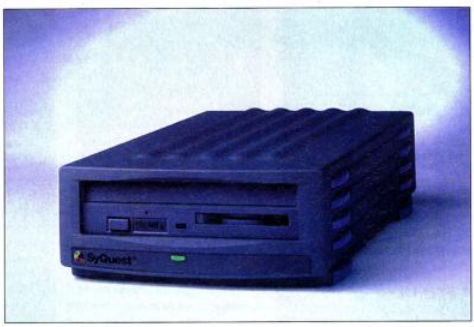
We all know that the Zip drive is going to be popular. Down at HiSoft's Bedfordshire headquarters the phones are literally red hot with orders for the new wonder drives that offer 100Mbs of storage on a sub-£15 cartridge.

Not to be outdone, Gasteiner has announced that it is to distribute SyQuest's answer to the Zip, the EZ-135 when the drives arrive on stream in September.

The EZ-135 is a portable 3.5 inch drive unit that uses specially designed lightweight cartridges capable of storing up to 135Mbs of data on each. The drives are claimed to be faster than Zip drives, with an average access time of 13.5 milliseconds against the Zip's 29 milliseconds, and twice the Zip's data transfer rate of 1.2 Mbs per second.

The drives, which cost £199 including software, cable and free cartridge, will have a two year warranty and with cartridges at around £12.50 each, will offer an amazingly low cost per megabyte. ST owners will need the Top Link adapter at an extra £59 unless they already own a SCSI peripheral.

Gasteiner can be contacted on 0181 345 6000.



The SyQuest EZ135 - we'll be bringing you a full comparison with the Zip drive as soon as it's released.

New products dawn

Norfolk-based Atari hardware specialist Sunrise Electronics is about to launch the SE-500, a high quality mastering unit for Atari and C-Lab Falcon owners. It comes with DAT quality analogue to digital and digital to analogue converters that bypass the built-in hardware and also provides AES/EBU, SPDIF and EIAJ/304 input/output.

SCSI-2 ports are provided for two user-selectable hard drives which can be mounted internally in the SE-500 19 inch rack mount case which also features front panel access for removable media.

The unit connects to the Falcon's DSP port and uses the same protocols as the Steinberg FDI so compatibility with existing software is assured. Analogue input levels are adjusted manually on the front panel by means of non-volatile digital pots and displayed accurately via LED meters. The price is expected to be around £400.

Also on the way is the SE-800, a self contained unit for Falcon owners requiring eight channel analogue to digital input and eight channel digital to analogue output. It uses 64 times over-sampling Delta Sigma conversion techniques. Again it connects to the Falcon DSP port and the serial input and output uses the Falcon's 128 bit per frame transmission standard. The eight channel inputs are set manually and displayed on the SE-800.

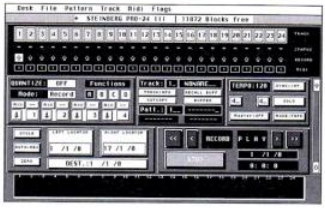
The SE-800 also features a 20Hz to 20kHz frequency response, selectable sample rate and mains filtered power supply. Applications include simultaneous eight track recording to hard disk, eight track playback to a mixing desk and stereo effect send and returns and the unit is expected to cost around £700.

For further information contact Sunrise Electronics on 01379 853845.

PRO 24

the Steinberg classic

Classic sequencing on a budget

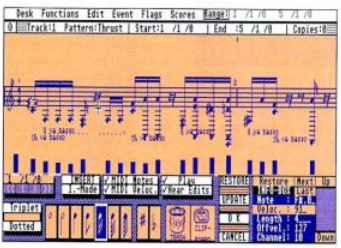


£14.99 inc. p&p

The Atari ST is the classic computer for music sequencing. PRO 24 V3 had a big part to play in making it so. PRO 24 has been used to make hit records by the likes of Dire Straits and Midge Ure. PRO 24 is not the latest and greatest sequencing package available today. That honour is reserved for the likes of Cubase and Notator which cost hundreds of pounds. But PRO 24 is the software on which Cubase was based – learning PRO 24 means that you're taking your first steps towards learning Cubase.

Our PRO 24 packs are ideal if you want to start sequencing on your ST or if you have so far only used PD and Shareware sequencers. PRO 24 comes complete with the original manual and dongle.

Its many powerful features include:



- 24-track MIDI music system;
- Record, play back and edit from any MIDI keyboard or other MIDI device;
- Display, edit and print music notation;
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ATARI World

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Right to reply

Put pen to paper and speak your mind in Atari World's letter pages...

Open letter to Atari World

I'm most disappointed in the review of Rainbow II Multimedia written by Nial Grimes. Not because of the low rating (4/10, when ST Format gave it 96%), what I'm upset with is the way he wrote the review. First of all he seems biased towards Apex, but what's more important, he doesn't seem to have tested Rainbow II for more than 15 minutes. If he would have tested it I'm sure the article would have had more details (positive and negative ones), instead of dedicating most of the review to the interface.

I have the following objections to some quotes from the review: "Apex Media has pretty much sewn up the high-end Falcon graphics market, but there's still plenty of room left for low cost art packages that can make good use of the machine's abilities."

I see, obviously, there can be only one Falcon art package costing more than £29.95!

Also: "At first Rainbow II seems like a major upgrade, but mentally strip out the parts that you will never use and you'll probably find that you're left with the picture and photo studios..."

Rainbow II is a multimedia program, intended to be used by people who want both graphics and sound. I don't believe anyone talked about "mentally stripping out" the drawing capabilities of Apex Media, just because its morphing and animation parts were more developed.

And: "... but when you're looking at a close to £60 – a 50% stake in a copy of Apex Media – these things do start to matter, big time."

So £60 is expensive, and £120 is cheap? Maybe Nial Grimes meant to say that Apex Media is far superior to Rainbow II, and therefore worth its price tag, unlike Rainbow II? I strongly object to that. I mean, what is there to compare? They are two completely different programs. Rainbow II doesn't have morphing and support for animations (apart from the Sprite Studio), and Apex doesn't have sound editing, slideshows etc. As I see it, they have only one thing in common: picture editing, which in many ways is much more advanced in Rainbow II.

I would like to point out that I have nothing against Apex Media. On the contrary, I think it's a well written morphing/animation package, and I know for a fact that many people have bought both Apex Media and Rainbow II Multimedia as the two programs complement each other.

Mandus Soderberg, Addiction Software

I am sorry that you disagree with my appraisal of your "baby" but that is only to be expected as the author of Rainbow. Your whole argument seems to centre around the assumption that I didn't test the package properly. On the contrary, it was using the software that highlighted the problems.

I hate to point out the blatantly obvious, but the review was handled from an upgrade perspective. Hence, I first pointed out where the original Rainbow slotted into the great Falcon scheme of things (using Apex as the touchstone) and then went on to describe the new package, with its enhanced features. If you look carefully you'll notice that the underlying comparison was with Rainbow I. However, I also felt a duty to address the question that would instantly spring to the mind of anybody interested in playing with true-colour graphics: "should I be looking at Rainbow II or Apex?" Rainbow II does indeed have rather good picture editing abilities but so did the original package (with the reservations mentioned in the review) and at half the price.

As you point out, the extra value is provided by the multimedia parts of the package, but let's just clarify what we are talking about here – a "multimedia" program that (by your own admission) has weak animation abilities. In addition, it has absolutely no form of text support, very limited sound playback facilities (it won't even look at standard tracker file) and... I could go on. In fact, there are ST packages that achieve more in terms of multimedia than Rainbow II.

I do find it rather strange that you have been reduced to pure semantics and out of context quotes in your attempt to put forward a case.

At this point I could move into a Rainbow II character assassination, but I don't really want to turn this into a point scoring exercise and don't need to – readers can look at the hundreds of reviews I've written in the past to judge how fair and unbiased my views on software are. I'd love to be able to turn round and say "Rainbow II is the best thing since sliced silicon". Unfortunately, it isn't.

Nial Grimes

Biased guide

Would you consider including a monthly buyer's guide giving price comparisons of the most popular hardware items, such as hard drives, printers and so on? This would be a boon for the consumer, saving time searching or ringing around and it would also allow healthy price competition if companies were invited to submit their best prices for inclusion each month.

A D Parkinson, Swansea

It's something we've considered but there are too many problems with this approach. Firstly, it would take up several pages and let's face it, it's unlikely to be as good a read as one of Nial Grimes' features!

Secondly, prices change very quickly indeed and it would be an administrative nightmare to maintain it accurately. And don't say "other mags do it" because if you investigate further, you'll find mountains of mistakes in all of them.

Thirdly, it would actually discourage readers from looking at the ads and that's where the real bargains are often to be found. Some of the ads are inserted at the last minute whereas editorial pages have to be planned and worked on in advance. No, I think we should devote as much space to editorial as possible and leave the ads to sell the gear – but if enough of you think differently, I'm all ears.

Younger every day

I may only be 11 years old but I am really keen on my Atari STFM 520. I have got all three issues of Atari World and think it's a brilliant magazine.

I'm very concerned about Atari's future. I'm interested in knowing what the ST market is like? I'm also interested in knowing how well Atari World is selling. Lately I have written to Atari and asked if they will bring out Theme Park and Premier Manager 3 on the ST. They wrote back and said third parties do not make ST software any more. Do you think this can ever change?

I think it is the best mag in the world. I have enclosed a stamped addressed envelope and I eagerly await your reply.

PS Long live Atari!

Tom Larkin, Brentwood.

It's always nice to get a letter from one of our younger readers – it's quite something to think that the first ST was sold before you could even talk! Your enthusiasm certainly says something for the ST's lasting appeal as a home computer.

You want to know what the ST market is like? I suppose small but vibrant is the best way I can describe it. There aren't that many players but the ones that do exist are friendly and helpful. Some aspects of the ST market are doing extraordinarily well ñ Joe Connor's shareware support service, for example, and the latest games like Obsession and Substation. There is also an ever increasing number of Atari owners who are getting online to the Internet and other services.

Unfortunately I can't see Atari doing anything else for the ST at all – their reply shows how little they know about the whole Atari scene. Third parties are bringing out an amazing number of products - just look at our reviews section!

PS Long live Atari computers!

Atari grumbles

I've been following things in the Atari scene for some time now, and being a long time Atari user (8 years) I would like to put a few points to you. UK users seem to be solely interested in games and nothing else. I bet the recent Atari World survey showed most owners only with a 1Mb or less machine, and with only a few die-hards (like me) with a hard disk, printer and modem, etc. How many people still struggle along with a floppy-based system? Only the people whose sole interest is playing games. Why do you think the UK market is so games orientated? Are UK ST techies so rare?

Darren via Internet

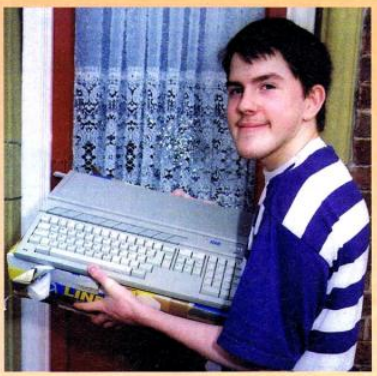
I can't understand your attitude to games. So many Atari users I meet stick their noses in the air whenever anyone mentions the word game. If I had a quid for each time I heard the phrase "I never play games" or "I'm a serious user" I'd be a rich man.

What is the problem? I play games with my kids, I play golf, I play cards. Why should I feel ashamed about playing games on a computer? I don't feel ashamed about playing with my kids.

In point of fact the leisure side of computing is enjoying a huge rebirth at the moment with increasing interest in the Internet, multimedia and all kinds of games. Once upon a time the Mac was purely a serious platform for publishing and design - now there's a new Mac games mag. PC owners have Doom and so-called interactive movie games like Wing Commander. Why should the ST be any different? It's a home computer, for use by all the family and games are an important element in home entertainment. What's more, without games, the Atari platform would fade away rapidly. Come on, chill out, loosen up – or better still, in the words of my daughter – get a life!

Write On...

Got something to say? Even if you're just sick of looking at my face, write to me at Atari World, either at the address on page 98 or via e-mail to andwright@cix.compulink.co.uk.



A proud Stephen Smith holds his "unique Swedish development".

Swedish surprise!

Seventeen year old Stephen Smith got quite a surprise when he wrote to dynamic Swedish games developers, Unique Development.

"On July 12th I wrote a letter to Unique Development Sweden congratulating them on their two excellent games, Obsession and Substation which I had bought from JCA Europe and which are happily installed on my hard disk.

It was a brief letter, thanking them for the creation of these games. I also told them my highest ever score on one of the Obsession tables – which I now know is very poor! I asked them if they could tell me some hints on disposing of a certain monster on a level of Substation and I also asked them about the level designer for Substation. I also mentioned that I thought it would be wonderful to play head to head Substation with another player.

Nearly a month passed and I thought they were going to ignore my letter or that perhaps it has got lost in the post somewhere between here and Sweden."

However, on 3rd August, Stephen had a pleasant surprise. "At about 2.30pm a Parcel Force van turned up outside the house and the driver offered my a rather large parcel. I didn't have the slightest idea what it was or where it had come from until I looked at the invoice. It was from Sweden and was signed by Peter Zetterburg, the managing director of UDS.

Grabbing a pair of scissors I managed to hack my way through the stiff Sellotape on top of the box. Was it the level designer they had sent me? Was it the combat pack? To my surprise, it was neither – it was an Atari 520 STe expanded to a megabyte, complete with MIDI and power cables! Not only that but the package contained a series of hints and tips to get me past the monster that was causing all the trouble.

Of course it was a Swedish STe with Swedish symbols on the keys and a Swedish desktop but none of my friends have got a machine like that! At last I can play head to head! I thought I'd write and let everyone know what a superb and generous company Unique Developments Sweden is - they're the tops! Yours very, terribly happy"

Stephen A Smith, Worksop

What can I say to that? It's the kind of story that makes you blink a couple of times and feel glad you're part of the Atari scene. Substation and Obsession are without a doubt two of the best games ever written for the Atari. With support like that, they've got to be worth trying out.

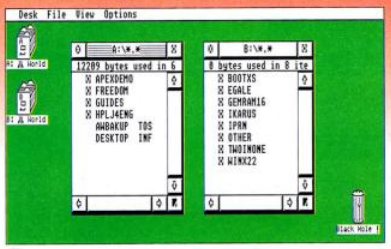
Reader Disk

Credit card order hotline: 01487 773543

A cover disk increases the price of a mag yet many readers never even look at the software! There has to be a better solution – the Reader Disk...

The optional Reader Disk directly supports the software covered in the magazine and creates a link between the reader and the software author. Atari World supports and encourages authors – in return you can do your bit by supporting them. The Atari World team is in constant contact with the best Atari programmers around – we keep your finger on the pulse and obtain the very latest versions, often exclusive to Atari World!

This issue there are two disks and the cost is £3.50 inclusive of post and packing. Don't forget that subscribers get all additional disks absolutely free! Check out the special subscriber deals on pages 40–41



Everything on this month's reader disks is covered inside the magazine. The folder extension points you to the relevant section of the magazine. AW for the main mag, ST for ST Source, PRO for Atari Pro and PA for Public Arena. For example a folder called ADDRESS.PA means Address is covered in Public Arena. To make it easy to back up your reader disks a copy of AWBAKUP.TOS is included. Simply run AWBAKUP.TOS and follow the on-screen instructions; the program even formats the disk for you. We recommend that you always store your original disks in a safe place and don't use AWBAKUP.TOS for any other purpose.

What's on the disk?

Disk A

Apex Media demo v2.14

Commercial • Titan BSS

A real treat for Falcon owners, create or retouch images using the extensive range of tools and filters then try your hand at morphing and animation. The demo has no Save function but is otherwise fully functional.

Freedom v1.14a

Exclusive • Shareware • Kolschwitz/Kruger

Freedom is a customisable replacement file selector which offers unique multitasking features, user definable icons, built-in file copy, move, delete, find and info functions all wrapped up in a sexy interface.

Atari World Profile

Exclusive • Joe Connor

Database for issue five in ST-Guide format. The database now covers the first five issues. To maintain your database you may prefer to create a separate database disk which can easily be extended each month: Use AWBAKUP.TOS to make a copy of the Reader Disk. On the copy delete everything apart from the GUIDES folder. Each month copy the contents of the latest Reader Disk GUIDES folder to the GUIDES folder on your database disk – some files will be overwritten each month, this is normal. Optionally add a copy of ST-GUIDE.ACC and ST-GUIDE.INF to create a stand alone database boot disk.

Disk B

BootXS v2.21 demo

Shareware • Christer Gustavsson

BootXS is an unusual boot manager that makes it possible to set up several different boot configurations. BootXS handles Auto folder programs, accessories, CPXs and all the desktop configuration files.

Egale v2.7i

Shareware • David Reitter

Got two similar looking files but you're not sure if they're identical? Egale can compare files and highlight any differences. Can also edit files in HEX or ASCII format and create 'patch' files to update software.

HPLJ4ENG v1.0

Special Edition • Shareware • Donald Bork

If you own any Laserjet 4 model this CPX can control all the settings. We've got our hands on the English version, normally reserved for registered users!

iPRN v1.05

Shareware • Peter Missel

iPRN is a printer accelerator that also monitors the printer status so if your printer is turned off or has run out of paper you won't have to wait ages before the error message appears!

Two-in-One v1.40e

Shareware • Gregor Duchalski

Two-in-One provides a point and click GEM shell capable of handling every archived file you're likely to encounter. Includes on-line help and useful default settings to help you get started.

WINX v2.2

Freeware • Martin Osieka

WINX is an Auto folder program which adds extra features to GEM windows. More features are available with TOS versions 2.06 or later but offers worthwhile benefits with earlier TOS versions. Improper AES window calls are also trapped which makes WINX a useful debugging tool.

GEMRAM v1.6

Freeware • Martin Osieka

GEMRAM is an Auto folder program which copies GEM into RAM and optionally sets up environmental variables. GEMRAM must be installed before attempting to use WINX.

IKARUS v0.14

Freeware • Christoph Zwerschke

3D Interactive graphic demo of a small town including church, main street with moving cars, flock of birds and other cuties. Requires a Falcon or TT with FPU to run.

Reader disk problems

In the unlikely event that a reader disk won't load or gives you any other problems, disconnect all peripherals, switch off your computer for at least 20 seconds and try again. If this doesn't solve the problem, return the disk to the Atari World Disk Sales address clearly labelled Atari World faulty disk and enclose a self addressed envelope. Your disk will be tested and replaced or returned as quickly as possible. Should you require technical help, call the Atari World Disk helpline on Wednesday evening between 19.00 and 21.30 on 01206 852602 or leave a message on the answer phone outside these hours.

SEE PAGES 66–67 FOR ORDERING INFORMATION AND BACK ISSUES

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FALCON 030

Quality and Service

At Floppyshop we only stock the very best software. All our ST disks are double sided and are crammed full. Our Falcon disks are mostly HD and are full where possible. In addition, our catalogue disks are the most detailed in the UK and cost just £1.00. Please state ST or Falcon. Same day despatch on orders.

Credit card orders are welcome (minimum value £2.00). Unless otherwise stated, all disks cost £2.00 each and run on astandard machine with 512k of memory (1 Mb if it's a Falcon) upwards. COLOUR, OR MONO Disk numbers ending 'C' i.e. GAM.10C are for COLOUR. MONITORS OR. TVS ONLY. Disk numbers ending 'M' eg. ART&SM are for MONO MONITORS ONLY. RGB or VGA Indicates the monitor type required for a specific Falcon program.

SERIOUSLY SPEAKING...

The following disks represent a selection of our most popular utility type disks. We have over 700 top quality utility disks in our catalogue! Whatever your needs, the chances are that we have a program that does the job. Why not order up a copy of the catalogue and check it out for yourself.

UTL.15C ASSISTANT CHEF - An excellent recipe database. Easy to use and supplied with a data file full of tasty treats. 125 main recipes on UTL.30/5.

UTL.157M GP'S DATABASE - A custom written database designed with the family doctor in mind and geared towards patient care. STICKER. 3 - Design and print your own disk labels, complete with graphics. MONO DISK.

UTL.165 VIRUS KILLER/S - A collection of 27 virus killers and anti-viruses. Most are geared towards bootsector viruses but some tackle link viruses too.

UTL.173 OPUS SPREADSHEET - A comprehensive GEM based spreadsheet. Really easy to use. Even supports the printing of graphs and the use of multiple fonts if used with GDOS.

UTL.187C ANI-ST - A superb animation package originally released commercially as Aegis Animator. Create your our cartoon adventures or mini-films with this one.

UTL.257 LAZERBRAIN - An Epson emulator for the Atari SLM804/605 laser printers. Includes full graphic printing support.

UTL.279 & UTL.3429 PAGESTREAM SUPPORT DISKS - A selection of useful utilities, printer drivers and such like for use with Pagestream. £2.00 per disk.

UTL.297, UTL.3022, UTL.3722 & UTL.4369 CALAMUS SUPPORT DISKS - A selection of useful utilities and templates for users of Calamus DTP. £2.00 per disk.

UTL.321M THE PRINTING PRESS - An easy to use art and printing program for designing letterheads, greeting cards, labels etc. Epson 9-pin and 24-pin and compatible printers supported. MONO DISK.

UTL.325M GUTENBERG - Free standing print utility for ASCII and 1st Word/Wordplus files. Uses alternative fonts to enhance output to Epson compatible 9-pin printers. Fonts and font editor also included. MONO DISK.

UTL.349 SUPERBOOT 8.1 - Undoubtedly our most popular boot up configuration program. Select which ACCs, Auto programs and CPXs you want to load as well as your preferred DESKTOP.INF file. You can even display a picture and play a sample while your computer boots up!

UTL.362C FULLSCREEN CONSTRUCTION KIT - Allows you to create and display overscanned 403x274 graphics in low resolution. Includes GPA and assembler source for use in your own programs.

UTL.367 STOS TYPING TUTOR - Simply the very best typing tutor available. Contains over 80 lessons. Colour or Mono.

UTL.391 CAL V6.3 - Probably the best calendar/diary type program on the ST. Everything can be configured to your own preferences. There's also an Auto program which displays the next 22 events/appointments each time you boot up.

UTL.392 POOLS EXPERT PREDICTOR V4.12 - An easy to use pools prediction program. Not guaranteed to win you the jackpot but you never know your luck!

UTL.405, UTL.4536, UTL.5001 HEWLETT PACKARD DESKJET/LASERJET SUPPORT DISKS - Everything you are ever likely to need for your HP printer. Includes printer drivers for many different packages, screendump programs, configuration utilities and much more. £2.00 per disk.

UTL.3025 ZX SPECTRUM EMULATOR V2.07 - An all time favourite. Runs practically all Spectrum programs on the ST, TT and Falcon. Now includes joystick, microdrive and printer emulation. Needs 1 Meg.

UTL.3152 SAGROTAN V4.14 - An English translation of Germany's number 1 virus killer program. It detects all known bootsector and link viruses and includes a library of harmless executable bootsector, so that you won't accidentally destroy your favourite games and demos.

UTL.3229C Sets of maps for FUTURE WARS, BEYOND ZORK, DUNGEON MASTER, INDIANA JONES & THE LAST CRUSADE and SPACE QUEST.

UTL.324C PIXEL TWINS SHAREWARE DISK. 3D STOS - A Shareware 3D extension for STOS Basic users. CLIP STUFF - Displayers for Cyber Paint and CAD 3D2 files and players for MOD, SPL and AVR files.

UTL.3534 RAMWORLD 2 - A taste of virtual reality. Design your own 3D worlds and navigate your way through them. GROCERY V3.0 - Helps you create, cost out and print your shopping list. Compares last month's prices with this month's.

UTL.3539 ICON JUGGLER - Converts between RSC, ICN, NIC and ICE icon formats for use with Desktop replacements or TOS 2 upwards. FIT TOS 2 - Complete instructions on how to build and fit a switchable TOS 2.06 upgrade to an STFM.TOS 2.06 ROMs and a knowledge of electronics are also required!

UTL.3617C THE ULTIMATE MORSE TUTORIAL - A complete tutorial package designed to teach you morse code to the proficiency level required for the 'A' band Amateur Radio license.

UTL.3619 THE TALKING TUBE MAP - A map of the London Underground with a synthesised voice to guide you on your way. Includes a search facility and the ability to zoom in on areas of the map.

UTL.3644 FOOD AND WINE - A Hypertext based database on the wines of France, Germany, Italy and Australia along with recommendations on food to have them with. Graphically based, you just click on the pictures to navigate your way around. Contains a wealth of information on the foods and wines of these countries.

UTL.3721C NEWSDISK CREATOR V2.1 - Everything you need to create your own disk magazines with this easy to use DIY kit. Needs 1 Mb.

BUDGIE GAMES BONANZA!

The following disks represent a small selection of disks which used to be part of the Budgie UK scheme. The programs on these disks are of a very high standard and each is a classic in its own right. Special price £1.50 per disk (£3.00 under orde).

BUD.3331C CRUSH - Your city is under aerial attack. Using the bricks and rubble around you, you must make your escape over the walls. A WINTER'S TALE - The followup to the hugely popular Dizzy Lizzy but with a Christmas theme to it. Forty levels of snowballs, grave stones, exploding Christmas puddings and more! BERT THE SQUIRT - An 80 level game designed to make Bert farter! Collect the fruits and bounce on the springs but watch out for those aliens.

BUD.3637C FOOTBALL TACTICIAN DIVISION ONE - A full implementation of this former commercial title with regard to English Division One. Up to 24 players can take part in this extensive soccer management game which allows real-time match decisions on formations, tactics, substitutions and so forth. Full Division One schedule, all European Cups, League & FA Cup.

BUD.4176C FOOTBALL TACTICIAN PREMIER LEAGUE - As per BUD.3637C but for the English Premier League.

BUD.4666C OVERSCAN INVADERS - The old favourite brought right up to date with bigger more colourful aliens, four channel digitised sound, 32 colours on screen and of course fullscreen (no border) display.

BUD.4882C ONE OF FOUR. - One of the best Connect 4 games around. PERILS OF PENFOLD - Guide Penfold through a maze of caverns armed only with a pistol. GOLDRUSH - An adaptation of the age old Lode Runner game.

BUD.4883C BLITZ II - Bomb out the building to clear a safe landing zone for your three aircraft. MAKE A BREAK - Answer trivia questions to get snooker balls. WORD PUZZLE GENERATOR - Create and print your own word puzzles.

BUD.4885C ACE INVADERS - A marvellous adaptation of the age old classic. Features classic and modern variants of the game. ZENITH - An original two player vertical two player shoot 'em up. TRI-HELI - Pilot your helicopter in this fast action shoot 'em up. CLOD HOPPER - Guide Bill through ten levels in this impressive platformers and ladders game.

BUD.4886C MAGIC BLOB - A fun platform game where you must collect all the objects and avoid the plants. SLIPPERY SID - Guide Sid The Snake around the screen avoiding colliding with the walls or doubling back on yourself. BANDIT - One of the very best one armed bandit games around.

BUD.4887C OPERATION ANGELICA - A game based around the Falklands conflict. Excellent graphic quality and impressive sampled speech. Four enemy territory and rescue stranded troops. QUEST FOR GALAXIA - Based upon the 8-bit classic, Galaxians, this is a superb Space Invaders type game.

PSICOTIC - A horizontally scrolling shoot 'em up set in Outer Space with lots of level to play.

BUD.4889C CRYSTAL CAVERNS - Explore the caves avoiding many lurants and unsavoury creatures. You'll learn a few spells to cast too! One of the best games ever written. MR. DIG - A perfect clone of Mr Do! Dig your way through the tunnels dropping apples on baddies, exploding smart bombs and collecting cherries.

BUD.4893C ONYX - A fast action shoot 'em up featuring parallax scrolling. Clear each level of aliens to progress to the next. HOSTILE RECEPTION - A shoot 'em up with a trading aspect to it. Similar in style to Blood Money.

BUD.4894C PASSWORDS - An addictive crossword puzzle. Lots of crosswords on disk for you to solve. MEGAMIX - Match up the symbols behind the closed doors.

BUD.4898C SUPER LEAGUE SOCCER - A football management game with all the usual features. FOOTBALL GENIUS - Four hundred football questions in this great quiz type game! Each time you get an answer correct, you score a goal.

BUD.4899C CARRIER ATTACK - A unique adaptation of the Battleships & Cruisers game with brilliant graphics and sound effects.

BUD.4900C GOMB - An eighty screen game in which you explore the most inhospitable corners of the galaxy. GUIDED MISSILE - A two player game in which you guide your missiles towards your enemy's base. GLOB - You are trapped in a clinic and must escape from the monstrous creatures within!

BUD.4901C LIZZY - Lizzy's back! - An extremely challenging and addictive Arkanoid theme. MONEY SPINNER - A fruit machine where you win lives as well as credits. Slip on a banana skin or get bitten by a parrot and it's over!

BUD.4905C DOUGLAS ROCKMOON 2 - A superb Boulderdash clone which is arguably better than the original was! Lots of 3D effects and modern versions of this old favourite. Features a choice of two speeds and has six levels plus bonuses.

BUD.4909C TRAVEL GAME - You must visit 37 cities across the globe in a specific order. Answer is limited but, nice extra by selling your photographs.

BUD.4910C AVENA BLUE - A superfast horizontal scroller where you must negotiate seemingly endless tunnels at mind boggling speeds. DENNIS & DENISE - Denise has been kidnapped and is being held to ransom. Fight your way through thirty screens of crazy platforms and ladders action to rescue her.

BUD.4911C CLACKER - You are chief dosd in a factory and must assemble the 'clacks' correctly in order to survive. HYLELIOS - A revamped version of Zyklop with multi-screens and special spells. Collect the diamonds and key, then head for the exit. BALLPARK - An original puzzle game in which you have to guide your robot to a safe exit, whilst avoiding monsters and collecting bonuses.

BUD.4912C QUATRUS - A Tetris variant based on rotating cubes. Each cube has four patterns which you must match before it reaches the bottom of the screen. SLIME NEMESIS - Your aim is to destroy stalactites of slime but your weapon destroys anything it comes into contact with. FIREGAME - Your mission is to extinguish one piece at a time but beware of the risk of fire. Insurance and buckets of water help.

BUD.4914C FOOTBALL MAGIC - A well presented football management game. Includes a digitised action replay of the highlights of each match.

BUD.4916C TWOT TOT & THE MANSION OF MADNESS - Platforms and ladders action where you have to visit 64 rooms, solve many puzzles and avoid evil bugs (in the mansion, not the game!) before finding your way out!

BUD^.4919C MATCH IT - A superb Chinese tile game. Great graphics and music, highly addictive too! PACO & THE TUNNEL OF DOOM - A Boulderdash clone with some original elements and 48 caves to tackle.

FALCON 030 SECTION

We were the first to support the Falcon and now have almost 600 HD disks in our library. The Falcon catalogue costs just £1. Falcon disks cost £2.00 each unless otherwise stated. Please note that the disks in this section will NOT run on an ST or STE.

ART

F.0303 KANDINSKY - The natural 'successor' to Easy Draw. Impressive vector graphics editing package which supports both mono and colour objects. SpeedoGDOS and Multi-TOS compatible.

F.4269 GIF - An excellent graphic utility for converting colour images to true greyscales. There are numerous filters in the program which allow you perform various transformations on your image. Filters can be applied to selected areas of the image or to the entire screen.

F.4368 GEMVIEW V3.15 - Allows you to display or convert almost any format of graphic file. Around 40 file types can be loaded and more than a dozen saved.GIF,JPEG & JPEG2GIF - Converts a GIF file into a JPEG and vice versa. JPEG V2.18 - Lets you run JPEG, Degas, Spectrum, GIF & TGA pictures in a slideshow or view them by double-clicking. RGB ONLY. BRAIN-STORM'S JPEG DECODER - Speeds up loading and decompressing time for JPEGs by about 10 to 1.

S-F4512 & S-F4513 POV RAYTRACE V2 - The popular raytracing package. New features included improved anti-aliasing, soft penumbral shadows for extended area lights, simplified torus syntax, three new pigment textures and support for photog data. Two disk set. £3.50 for the set.

F4659 KEFTAL 24 - Creates textured backgrounds and keftal graphics up to a resolution of 24-bit True Colour. MANDELBROT MACHINE - Allows you to create fractal graphics using the Mandelbrot or Julia sets. You can set up your own parameters for creating a screen from scratch or load up one of the many pre-defined ones and zoom in on it. SPEED OF LIGHT V3.8 - One of the fastest Degas, Prism Paint, .IMG, GIF and JPEG viewers around. It also has lots of features normally associated with image processing.

F4786 ARCHIMEDES 24 - Generous GEM based sculpted raytracing package. Create your own 3D models on screen, then turn them into 24-bit True Colour raytracings. Includes a number of wireframe drawings and completed raytracings.

F8084 IMAGELAB 2.1 - A greyscale image processing package with a few nice touches. Features include scaleup, contrast/brightness adjust, linear distribution, equal distribution, median filter, dilation, erosion, edge enhancement and the ability to display any of an image's 8 bitplanes.

GAMES

F4339 LASERS AND MEN 2 - A Wolfstein 3D type combat game set in a dingy dark 3D maze where you are constantly being shot at by soldiers. You are one of the brownas and must eradicate the bloes to proceed to the next level. Needs 4 Mb.

F4352 TOWERS - You are shipwrecked on a mystical island and must rescue your friends who have been trapped in a tower by a rockfall. A superb one or two player (needs 4 Mb for two players) Dungeon Master clone.

F4634 BLACK HOLE - An arcade type game in which you must find two coins in order to progress to the next level. Collect objects as you go, but uncover too much and you're dead. VGA ONLY. Needs 4 Mb.

F4779 STARBALL - This is a pinball game like no other pinball game before it! Features include three sets of flippers, three bonus screens and the game runs at 50 frames per second with Soundtracker music playing at 50Khz.

F5020 ASTROCHINO V1 - A re-write of an old shareware 'em up. Your home planet is being invaded by flying saucers and you must destroy them. Blast everything that moves and work your way through countless levels, each one faster and more furious than the last. Panic 94 makes good use of DMA sound, the blitter and large screen resolutions. Needs 4 Mb.

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F5157 TOWERS II - An atmospheric Dungeons and Dragons type game with objects to collect and use, guards to fight, doors to unlock and spells to perform.Probably the best game you will ever play! Needs 4 Mb and a hard drive.

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F5217 NISHIRAN - A massive role playing game, similar in concept to Dungeon Master but set in Outer Space. Atmospheric introduction and intriguing gameplay.

F5221 ASTEROIDIA by 'Arcade Dave' Mumie - The ultimate Asteroids clone with stereo soundtrack, texture mapped rocks, superb background graphics and more. Falcon enhanced version. Needs 4 Meg.

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F4218 NEW TREND DSP SOURCES - A collection of over 200 source code examples in DSP56001 assembly language.

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F4574 THE GRAPHIC LIBRARY FOR C BEGINNERS - Allows you to handle graphics, sprites, mouse events, keyboard events, file access, real time clock usage, double buffered animations, digitised sounds, memory management and more. The module has currently been tested on PC, Mac, Amiga and Unix machines as well asTOS, so your code will remain portable through use of this library.

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Mastering *Papyrus*

Ofir Gal mastered Papyrus long before the rest of us. Will the FaST Club's latest help guide do the same for you?

If you own Papyrus you already know what a great program it is but are you making the most of it? If you're not sure, Mastering Papyrus is a new online help system designed to make Papyrus even easier to use. It includes a step-by-step tutorial as well as an explanation of each Papyrus function.

The Mastering Papyrus package includes a 52 page manual and a single disk containing the main desk accessory and help files. There are several folders full of clipart and example documents. The installation however is not very friendly. You have to copy files manually and then set paths in the configuration dialogue box. On to the desk accessory itself.

The guide is displayed in a GEM window with a set of icons to help you navigate your way around the help system. The menu bar is identical to the Papyrus one. Selecting a menu item displays some help text about it. The absence of hypertext links, ST-Guide style, is a little disappointing, as well as the interface which does not make the best use of GEM. The window contents cannot be scrolled for example. It also suffers mild redraw problems under MagiC.

The help text on the other hand is quite useful and includes an index. In addition to that, the printed manual contains various tips and tricks, including a tutorial explaining how to create a booklet for binding and how to use the table calculation to produce invoice forms.

Mastering Papyrus displays the help text in a GEM window. The menu bar mirrors the Papyrus one, making the help text easy to find.

Publisher: Spar Systems
UK distributor: FaST Club
Contact: 0115 945 5250
RRP: £29.95

Requirements: 200K of RAM, high res display
Pros: Indexed help, plenty of clip art and templates
Cons: Poor user interface, confusing installation

SCORE: 5

Unicentre

Andrew Wright makes more room on his desk with the new Unicentre.

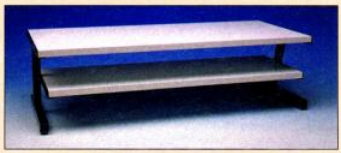
If I told you I was running Atari World from a desk measuring around four feet long by three feet wide, you'd probably be shocked. Having said that, it's all most of us are blessed with so there's no point in moaning – all we can do is make the most of the space we've got.

That's the thinking behind the Unicentre, a new addition to Compo's range of budget priced computer add-ons. The Unicentres are simple stand-alone shelves designed especially for Atari owners. Two sizes are available and both consist of two white melamine coated shelves held together at each end by sturdy black metal brackets-cum-legs.

The smaller model is 53.5cm long and 30.5cm deep. Both shelves have an 8cm clearance. The larger model is slightly longer at 71cm long but the other measurements are similar.

There is enough shelf clearance for most STs and Falcons as well as Mega ST, Mega STe and TT keyboards and you can fit most peripherals under the middle shelf or better still on the middle shelf out of the way. This leaves the top free for your monitor or monitors.

On my desk at this moment is the larger of the two. It was actually designed for TT owners but it's just what I need. Underneath sits the Atari's case, on the middle shelf sit the monitor switch box, external SyQuest drive, Megafile hard drive, and on the top sit the two monitors and the modem. Naturally this has let me reclaim a huge amount of desk space for important things like coffee cups, pencils, floppies and scraps of paper. All I need is more hardware to fill it up again...



to hide the keyboard conveniently when you're using the desk for something else. Treat yourself.

Seriously these Unicentres are a good buy. They are sturdy enough to take two monitors (including a huge 17 inch one at present) and are just the right size to be able

Publisher: Compo
Contact: (01487) 773582
Price:

Requirements: Any Atari
Pros: Cheap • strong • lots of uses
Cons: No room for some vertically expanded STs

SCORE: 7

Sprite Works 2.0

Tim Finch looks at a new sprite editing and programming package.

GFA BASIC is often overshadowed by STOS as a games programming system but Sprite Works version 2.0 aims to remedy that situation. It offers a suite of new commands which can be used with the GFA BASIC programming language to produce all manner of games, from arcade action stuff to puzzles and adventures.

The Art Editor in the process of editing the opening screen to a bundled game.

Essentially this three disk package adds to GFA BASIC around a hundred new commands which attempt to provide all the basic graphic, sound and program control commands you're likely to need. But how does it really shape up? Lets start with the most important part of the package...

Being naturally curious, I went straight to disk three where there are two finished games to play, complete with GFA BASIC listings. Joystick in, sound on, I was ready to play. First up was Going Down With The Captain, a 2D scrolling game where you control the captain of a sinking ship as the water slowly rises. You survive for a limited time under water and have to collect objects and fix pipes. Nice.

The flying dots on the upper half of this screen shot were converging together to eventually produce the line 'WITH SPRITE WORKS', shown completed, about a second later in the lower half of this shot.

Next comes Saturn's Rings. Aha! Asteroids! And the discovery that I still can't blow those rocks up. Nonetheless, using a standard 1Mb STe the games were very playable. But what about scrolling smoothness? Sound quality? Accuracy of collision detection? I was impressed with them all, which has to be a good start.

Head on

"OK, Tim, serious head on now." I dug out GFA BASIC and looked over the program files. It's probably pertinent to explain that I'm a seasoned GFA programmer but that's just as well because Sprite Works' code is comparatively complex. Indeed the first GFA file I loaded had line after line of uncommented code. Aaagh!

Still I plodded on, encouraged by the bundled games, and opened the 140 page A4 ring-bound manual. That was a big mistake - it had been going so well until then. The first page kicks off with GFA technical jargon while the next thirty or so contain command syntax details so technical they're likely to dishearten any programming fresher. What a welcome...

There's a lot of confusion too, with some section headings mixed up. Some parts of the manual are given over to helping beginners but there's little doubt that Sprite Works, thanks to the manual, is likely to be a big problem for all but the most experienced programmers.

Great code

If you're up to it though, you could soon be adding all kinds of embellishments to your programs, from explode and parallax through to wipe and pro track. All the commands are written in machine code and run at healthy speeds. In Sprite Works' favour is the examples folder on disk 2 that contains a GFA BASIC listing demonstrating every command. These examples prove very helpful for text, background, sound and sprite manipulation. They work quickly, seem very stable and are well coded and useful.

Sprite Works comes with two map designers, a sample editor and an art package. These utilities help you draw backgrounds (caves, racing tracks and so on), turn them into sprites (the game's moving parts) and set up the data files for your program to use. The art and sample editor are both basic but easy to use. The map editors help work out which parts of your background are solid and which aren't, allowing, for example, your game to detect when you have walked into a wall. The manual details all these utilities but very briefly and without many screenshots.

All in all, the final game quality is excellent and the accompanying tools are useful but the manual is a bit of a problem. Sprite Works is a classic example of a skilled programmer knowing everything there is to know about his subject. Unfortunately, he doesn't appear to have the ability to communicate his ideas to a wider audience. True, it's a product aimed squarely at coders but for newish programmers who fancy adding some spice to their games, a brick wall awaits.

The code to pull off these animated title sequences are the lines between the equal sign rows. Simple commands do it all for you.

Alien Thing

If you want to review a DTP program you give it to someone who publishes things. If you want to review a game like Alien Thing, you give it to Graeme Rutt...

A moody intro adds lashings of Aliens atmosphere...

Like it or not, the ST games market died a couple of years ago. Whether the market had really declined as far as the games houses would have us believe is open to debate but they pulled out and that's that. Interestingly enough, games like Obsession and Substation are still selling well - in fact, if ST software was still considered in the games charts, we would currently be seeing ST games in the top ten.

The objectives get more interesting in later levels — repair the hangar doors and you're outta there!

Anyway we can forget the Oceans and the Electronic Arts of this world - it's the smaller, less commercial software houses that will come up with tomorrow's goods. This may not be a bad thing, though, as bedroom programming has always been a hotbed of interesting ideas and state of the art coding techniques.

So, back to Alien Thing. What have the programmers at 999 Software given to us, the games-playing Atari public? Alien Thing comes on two disks and runs on any Atari. It can be installed on a hard disk, if you have one, and you'll require 1Mb of memory or more to run it. As far as I can see the game doesn't take advantage of the Falcon's better graphic and sound capabilities.

Rough and ready

You play an all-round tough-guy type on an intercept mission to head off an alien craft before it crashes on Earth. It's an over-head view game where you move your man around the maze-like spaceship, blasting meanies and solving puzzles. Control is via a joystick or the keyboard.

Graphically the game is - at best - average. Although the intro scenes are very well done the game itself is lacking in the image department. The disconcertingly bright, blocky graphics give the game a comic-esque effect which just doesn't suit the subject matter. However, I'm a jaded old games player who likes my blood served up with a generous helping of guts and at least this game is more than suitable for children.

The sounds in the game are just about the opposite of the graphics. Good quality samples of a moody nature abound - the intro drum track is excellent, the ship's sirens ear tingling and the gun samples would have the dead dancing the rumba.

Gameplay?

One overhead maze game is pretty much like any other. Alien Thing has a good plot, with 11 missions leading you through a logical sequence to your goal. To finish a mission you need to complete a specific task - mending docking bay computers, closing air-ducts and so on - while blasting monsters and making your way to the exit.

The game balance is pretty good and the missions become progressively harder. You need to gain access cards, ammunition and work out how to do the (fairly simplistic) puzzles. I couldn't get the level save facility to work but there are passwords available which will take you back to the start of the last level you were on.

Alien Thing isn't a classic game. It lives in a grey area between 'mediocre' and 'interesting-ish'. I did enjoy playing the game, although I'm not sure it would have any lasting appeal. If you're into games - or maybe you need something to keep the kids occupied - then try it out. The price of £19.95 is also a little steep - if this was budget priced game at £10 or so I could be a lot more positive.

Although I'm a little down on the game, 999 Software should be applauded for supporting the Atari platform. If they could sort out the graphics and maybe use a slightly less hackneyed game format then further games could be very good indeed.

Ha ha — take that, alien scum! The pulse rifle can be replaced with a flame thrower by exploring the filing cabinets.

Moving Pictures...

ATARI World BEATER

True-colour morphing and animation can be yours for under a hundred quid! Maurice Collins thrusts aside his Etch-a-Sketch and discovers the joys of Apex Media...

Apex is a word that sends a warm tingly feeling down the spine of any clued-up Falcon owner. It inspires thoughts of fast, true-colour graphics editing, morphing, animation and enough DSP code to keep Colossus busy for a year – all hidden behind an exceedingly fast and friendly interface.

The package was universally acclaimed when it was released over a year ago, and since that time has been taking on bug-fixes and small improvements at a steady rate. Add the new, lower price point and it seems like an ideal opportunity for a recap...

Quick on the draw!

Apex is all about animation and the whole attitude of the package reflects that fact. The concept of limited work screens is thrown out and replaced with a variable number of freely editable frames. A flick of the right button is enough to send you careering backwards and forwards between the tool and edit screens, and you can add a new frame, slide backwards and forwards through an animation and adjust the speed of playback with a few simple mouse clicks. What's more, the frames in memory are delta-compressed, meaning that only the changes are stored. In other words, you can do a reasonable amount of work and play on a common or garden, four megabyte Falcon.

Naturally, a good range of standard drawing tools are available to back up the animation facilities. Circles, squares, polygons, curves and lines are all on offer, and can be flood or gradient filled, which looks beautiful in true-colour. Interpolation is another option, with fade-fills based on the colour of the start and end points of a line or polygon. Essentially for an animation package, text is well covered too - most unprotected Calamus fonts can be persuaded to talk to Apex, although it's a pity there's not a way keep some sort of list of regularly used typefaces.

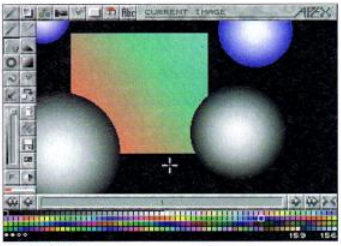
The morphing studio allows you to create effects similar to those seen in Michael Jackson's "Black or White" video.

Having mastered these basic tools the fun kicks in, and it's only when you begin to work with images, panning from side to size and zooming in to edit them pixel by pixel that the tremendous speed of Apex is hammered home – the response to the zoom facility, and most other parts of the package is instantaneous. Another example is the block handling. Any portion of the screen can be distorted, rotated and dragged without any delays or fuss, and this baby is running in true-colour!

A consistent interface helps to keep the power on a firm leash. Large, recognisable buttons are divided neatly into categories, or "workstations" – one for drawing tools, another for blocks and so on – and the function of each individual icon is displayed at the top of the screen, Calamus style. The right button can be relied upon to adjust the configuration of any tool and a keyboard shortcut is available for almost button.

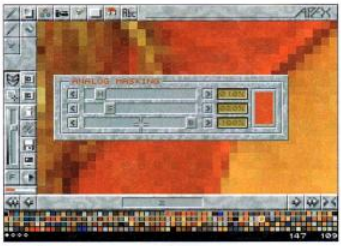
Wrecks and FX...

That's basic Apex out of the way, but the package goes much further than standard animation in allowing you to create morphs, or smooth transformations between two loosely related pictures. Despite the complexity of the operation, it is very easy



All sorts of drawing tools are available, including curves - all can be treated to interpolative or graduated fills.

to work with the morphing studio - define a number of control lines around the points you'd like to link up (for instance, the eyes and lips in the case of a face) and then move them to a new position on the final frame.



The non-linear tools are ideal for working with true-colour images, although they can take a while to master.

Apex automatically calculates the path of the lines in between, so you can easily check that a full render will not be wasted. I don't care how many times it's been done before, there is something uniquely

A small range of image-processing filters are provided to help tidy up frame-grabbed images.

enjoyable about turning your next of kin into the family pet, or vice-versa! A similar technique can be used on a single frame to create caricatures of faces or other warping effects, and again the whole process is remarkably speedy - we are talking a mere matter of seconds per frame.

It's only once you begin to work with true-colour images and animations (especially morphs) that you realise how limited normal drawing tools are. For instance, if you try to flood fill an area you will often find that that a seemingly black background is in fact made up of dozens of different dark shades. Apex has the answer

Good organisation and large, clear buttons help to make Apex easy to use, despite the level of power on offer.

Pixel editing is a piece of cake thanks to the zoom facility - press the plus key and feel those pixels rushing towards you!

in the form of its non-linear drawing tools, which allow colours to be masked if they lie outside a specified hue, saturation and brightness range. It's similar to the idea used by many retouching packages, and specially tweaked fill and draw tools are provided to make the most of the facility. Meanwhile, the colour workstation helps to control the vast range of shades at your disposal.

And on a similar note, you'll also find a small clutch of image processing effects. The animation blur, dejag, noise suppression and motion suppression filters are really designed to be used when dealing with live video animations, but as is so common with Apex's tools, they can come in handy elsewhere (see the walk-through for a small example). These, and other effects can be applied to a single image or a whole string of frames.

What price power?

Apex is creativity in a bottle. The sophisticated interface blends with the flexible tools and fiendish speed to produce an application that really fires your imagination. Morphs are just the beginning of the experience - start to play with the text workstation and block tools, and stylish presentations are only a few minutes away.

Apex has always been a superb package, and while there's nothing staggeringly new in this latest release, it remains perhaps the best demonstration of the Falcon's power - try finding another animation package on any platform that can offer such a well-honed range of tools and such an amenable manner. At the new price point, Fuji-fans should consider carefully whether they can actually afford to do without Apex...

Block distortion and rotation is a simple point and drag affair, and everything happens in realtime.

What's new?

In a word or four, "not an awful lot", but it's not a major problem because Apex was more than a little trendy to start with. Basically, you can expect to find some annoying buglettes fixed, along with some speed improvements and a little dose of attention elsewhere. The maximum canvas size is now 4096 by 3072, which should keep power-users happy and the playback speed for FLI/C animation is now handled correctly.

On the bug-fix side, the jackknife has been given a dose of attention and now recognises the designated background colour; compatibility with virtual memory drivers and all sorts of other bits and bobs have also been tweaked. Oh, and the effect in the info box has changed from a swirly tunnel to another wibbly-wobbly effect. Personally, I prefer the original tunnel; sad, eh?

Exposéd!

Apex not only loads true-colour images from disk, but can also siphon them directly from the real world via a frame-grabber and video camera set-up. Two devices are supported - ScreenEye and Exposé (Titan's own high-quality solution, which we covered in last month's issue).

From the user's point of view in operating the software, both are more or less identical - a small preview is displayed in the corner of the screen and if you can see it you can grab it. For full details on how the whole thing works and the kind of results you can expect, take a peek at issue five.

Both Exposé and Screen Eye are supported by Apex directly...

Animal nitrate...

Let's find out just what Apex is capable of doing, by blending a morphing animation with a little text...

1) The first step is to produce a nice-looking morph. Start by adding a few frames to the current animation - fifteen should be ideal. Load your images into the start and end frames and position the control points. Test the morph on the middle frame and if all is well, render the complete animation.

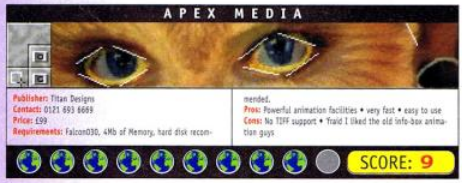
2) Next, add a scratch frame to the end of your animation. Load a Calamus font into the text studio and type the word Apex onto the screen, in white. Plain text is a little bit boring, so we are going to brighten it up a bit by creating a colour fade. Begin by creating a series of graduated boxes at the foot of your scratch frame.

3) Now snip your Apex logo from the canvas and paste it over the boxes, using white as a background colour. If all has gone according to plan, the fade should show through the text, as shown above. If things go wrong, press and double check that white is the background colour.

4) Fill the areas around the text with black and clear up any remaining portions of the graduated box. Now the clever part - apply the dejag filter to the whole frame three times. This softens the edge of the text and improves its appearance when pasted over other images, providing a pseudo-3D effect.

5) Finally we need to animate the text over the morphing background. Pasting is a two stage process - having set up the first frame, grab the next block and use the "relocate" function to position it correctly. Move on to the net frame and your block can be pasted without any guessing. Here, we've used perspective distort to create a spinning Apex logo and "Media" slides on from stage right.

6) The finished product - a fifteen frame, true-colour animation on a four megabyte machine. It's a pity that you can't actually see it in action; the in-between frames always look a little strange until you see the whole thing running. This is just a small example of Apex's power; warping text and all sorts of other effects are a possible with a little effort!



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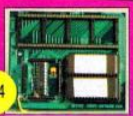

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The Ultimate Arena

Mortal Kombat action on any STe or Falcon! Nial Grimes dons the knuckle dusters and gets down to some serious spring cleaning...

Good use of special moves is needed to beat some of the tougher opponents.

Mortal Kombat is one of the select few arcade games to successfully marry live video animation with hand-drawn graphics, and The Ultimate Arena aims to port similar thrills to the ST.

The game is based around a futuristic TV show, the idea being to smooth-talk your way through a number of tough opponents in a battle to achieve "ultimate fighter" status (OK, so I lied about the smooth-talking). The shady characters that stand on the path to glory are quite varied, ranging from Arvester - a thinly disguised cross between Arnie and Stallone - to Serena, an Eastern beauty with more than Turkish delight on offer. In single player mode you have access to just two characters, but drag a friend into the arena and you can both make your selection from the full complement of six warriors and warrioresses.

Ooh - a touch of humour. Who does this Arvester character remind you of?

Although the range of moves you have at your disposal is fairly limited to start with, each character also boasts three secret "combos". Although they are powerful, they are also quite difficult to find and perform. I've got the damn things written down in black and white and I still struggle with most of them! Look, reviewers have to get some perks you know - have you any idea how stressful it is getting to play free games all day long? Anyway, good use of defence and the special moves is essential if you intend to get anywhere quickly.

Mortal coil

Any game that models itself on Mortal Kombat can succeed or fail on the strength of its graphics, and Ultimate Arena does a remarkably good job of conveying live video characters with a limited number of colours. There's a little bit of blending with the background at times, but it's not serious enough to affect the gameplay. Overall, the animation is pleasing and the players also wobble about convincingly while waiting for your battle instructions via the joystick or Jaguar PowerPad.

It's only after you start playing the game in earnest that limitations begin to surface. Lurking behind the sophisticated visuals is a slightly dated game engine - for instance, you can't leap over your opponent and the controls in general add to this slightly detached feeling. It's a shame because a lot of effort has obviously gone into the graphics and presentation, but it's something that no amount of digitised cries and thuds can take away.

The Ultimate Arena is a competent, if not truly outstanding, beat 'em-up. Fans of the genre will lap up the combos, the two-player mode, and the all-important Mortal Kombat atmosphere, and although the play mechanics don't quite measure up, it is still good value at the price.

You hit a brick wall if you try to leap over your opponent, which limits the gameplay just a little.

Some characters can blend with the backgrounds just a little, but it's not a serious problem.

The video graphics look remarkably good given the limitations of the STe.

Money business...

The Ultimate Arena is the first game from a new ST game publisher called STeam. They currently have no UK distributor, but you can order direct by sending £15 cash (or a money order to the same value) to STeam — T R Buz, BP 100, F-68220 Hegenheim, France. A rolling demo of the game is currently available from most PD libraries, if you'd like more of an idea of what you are buying. A Falcon enhanced version is said to be under development too.

Pinball fantasies

Iain Laskey gets down to some serious ball-rolling.

BUY ME!

Pinball Fantasies comes to the Jag.

The 32,000 colours and the great sound make this a real experience.

Pinball Fantasies is another of the increasing flow of 3rd party games for the Jaguar. A familiar game to owners of other systems, how does the Jaguar version shape up? Pinball Fantasies on the Jaguar has been uprated with 32,000 colours and user customisation producing what is claimed to be the best version yet.

There are four different tables each with a very distinct flavour and style of play. Up to 8 players can compete at once which can make for great fun when you have a bunch of friends playing together.

The gameplay is generally good. Most of the tables are great fun and very addictive. The action does seem a little slow to begin with but Pinball Fantasies is more about precision play than speed. However, some of the more obscure combinations of events needed to achieve bonuses are so convoluted as to be impossible to achieve through anything other than pure luck.

Stones and Bones is by far the easiest in this depart-ment and is probably the best one to start with.

The graphics are very colourful with nice detailing. Some tables look realistically 'used' with dented tracks and rust marks. The main tunes are fine to start with but soon start to get repetitive. Luckily they can be switched off leaving just the sound effects which are excellently varied and clear.

The whole game is bright and breezy and should provide hours of fun for all but the most jaded gamers. If you like pinball type games, PØinball Fantasies will not disappoint you.

Super Burnout

BUY ME!

The slower bikes provide better grip around corners, whereas the speed demons slither all over the place.

Motorbike racing comes to the Jaguar with Super Burnout. Iain Laskey gets on his bike.

Having been a fan of Super Hangon on the ST, I was keen to see how Super Burnout compared to its illustrious predecessor. With a variety of tracks and race conditions, there is much here to keep you occupied.

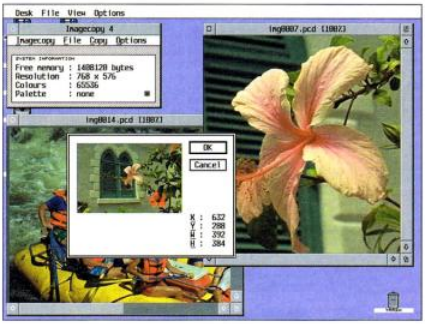
The game allows you to race against a friend or against a field of computer opponents. The computer racers play a pretty mean game and also improve as you do making it very hard to win on all but the easiest settings.

Initial impressions were less than favourable. The graphics whilst very fast, looked basic. They could have put much more detail into both the static screens and the main game. There are some nice touches though such as a trail of rubber as each bike accelerates away. Also, drone bikes are perfectly capable of crashing into each other. However, after the first race I was unimpressed.

Each track has the current best time and best average time recorded for it. This is where the trouble began. After the next race I was awarded a best time. That was the beginning of the slippery slope. Addictive? This game is the embodiment of the "just one more go" concept. Every time you raise the stakes, you just *know* you could shave an extra tenth of a second off the record next time.

Super Burnout is fast, fun and addictive. When you introduce the two player options, you have a recipe for success. It may not look as pretty as the state of the art race games but it has gameplay by the bucketful. The only real letdown is that the two player option is just between two humans – no computer drones race against you.

Have your Pictures just how you want them



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The interactive screen *Catalogue* feature displays thumbnail miniatures of images which can be clicked on to view, print, or convert the original images.

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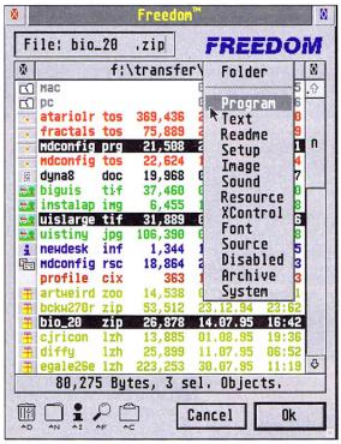


My personal setup sorts files by type then into alphabetical order.

Joe Connor kicks off a new series that will look at programs that open up new ways of working with your machine...

Where's the file?

We all use a file selector — it's a vital part of the user interface — but we've come to accept and work within its limitations. Luckily for us there's a new kid in town and the old rules have been thrown out the window. The result is Freedom — the freedom to choose.

Normally when the file selector appears on screen other applications are frozen until the file selector is closed again. Freedom is the first "non-modal" file selector for the Atari platform and is the key that sets other applications free.

Multitasking operating systems such as MultiTOS, MagiC and Geneva enable applications to run at the same time. If you're running a comms session, printing out some files and writing a letter, everything is fine until one of the applications calls the file selector and freezes the other applications.

With Freedom, applications can open their own file selector without interfering with other applications. This is obviously great news if you're multitasking but it also unblocks desktop accessories under ordinary TOS which are now free to multitask with each other, and that's where the fun begins!

As hard disks get bigger and cheaper, it's increasingly difficult to keep track of what's where. If you've ever found yourself staring blankly at the file selector you'll be pleased to hear Freedom offers several "get out of jail free" cards to play.

Working on the theory that prevention is better then cure, Freedom offers long filename support. After setting up a suitable file system (Minix, for example) filenames can be described comfortably using long filenames instead of the TOS standard eight plus three character file systems. Unfortunately setting up a Minix partition requires MiNT, MultiTOS and other utilities and is a bit of a chimps' tea party.

Meanwhile, the ideal way to see what's in a file is to take a look. As Freedom doesn't block the system, other applications can be called to display any file types. ST-Guide is an excellent choice because in addition to displaying ASCII format text it doubles up as an online hypertext help system and, best of all, it can call a second viewer to display things like images, sounds and resource files.

If a file is really buried and you can only remember part of the filename, Freedom's built-in search utility is ideal. Click on the magnifying glass icon, enter the filename, and send it on its way. While it's searching you can continue to browse and view files while the search continues in the background! If a suitable file is found, this can be loaded straight into the calling application and Freedom closes automatically.

If you've completely forgotten the filename but can remember a snippet of its contents, Freedom can also be configured to call a specialist utility to poke inside the files looking for specific text.

Memory matters

Freedom uses more memory than other selectors in return for most of the functionality of a replacement desktop. If memory is tight, Freedom can be installed so it is easily removed to free up the memory if required. It's easy to worry about running out of memory but if it isn't being used, it's wasted!

If you're multitasking on a fast machine with a hard disk, Freedom can be configured to automatically load each time an application calls a file selector and unloaded again after a period of inactivity.

Under ordinary TOS, Freedom can be installed into an accessory loader (for example Chameleon) which makes it easy to remove Freedom from memory at any time.

Hidden assets

As many people are likely to switch from Selectric, Freedom provides 99% keyboard shortcut compatibility (and it doesn't suffer from the long standing Selectric medium resolution display bug).

If you find yourself loading the same files day after day, check out the popups lurking under the File: editable field. A left

Freedom supports long filenames and offers drag and drop capability with modern desktops like Thing.

click displays a History popup and a right click displays a user defined Paths popup. Both popups are filtered with the current extension. For example, if the current extender is set to *.TXT, text files are listed. Freedom logs each file selection to disk, storing 200 entries for use by the History popup.

Using the built-in copy routines it's possible to copy/move folders and files in the background but 8MHz machines are likely to grind to a halt. A better option, if your budget can stretch far enough, is to set up Freedom to use Kobold, the lightning fast commercial file copier, which is directly supported by Freedom.

Some of the features tucked away under the bonnet.

Freedom can divide objects into file types. Each file type consists of a name, sort priority, icon number, colours and a mask. This information can be used to display, sort and select objects by file type.

File paths can be cut and pasted to the path line (or into applications) using the traditional Control-C and Control-V keyboard shortcuts. Similarly file lists can be sent to the clipboard using Shift-Control-C.

Hold down Control then press the Return key to display any file in the preset file viewer, in this case 1stView.

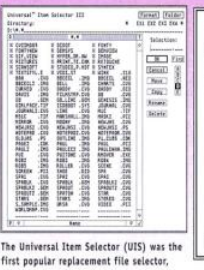
There's always room for improvement and Freedom's Achilles heel is its configuration file (FREEDOM.CNF) which has to be edited manually. Compatibility is good but can never match Selectric because there's plenty of software around that didn't call the file selector properly. Problem applications can be added to the #EXCLUDE section of the configuration file so if these programs are launched, the Atari file selector (or even Selectric) is displayed instead.

Freedom runs perfectly in medium resolution

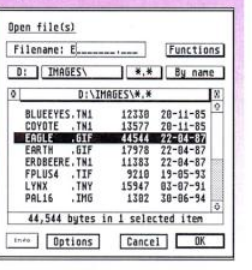
Overall Freedom is bursting with features. It's memory hungry and awkward for beginners to set up but many Atari users will find it irresistible. Get a copy from your favourite BBS or shareware library and try before you buy.

Family tree

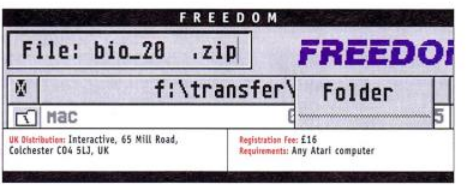
When Atari first launched the ST the file selector seemed friendly compared to the DOS prompt. Although TOS evolved, the file selector remains basically unchanged for nearly ten years. Power applications realised the limitations and developed their own application specific file selectors but the only snag is they're all different!



The Universal Item Selector (UIS) was the first popular replacement file selector, winning many friends with its ability to display directories containing hundreds of files.



Selectric burst onto the scene a couple of years ago offering similar features to UIS in a compact intuitive interface. An innovative auto-locator and ability to load multiple files at the same time into supporting applications, laid the groundwork for other selectors to build on.



UK Distribution: Interactive, 65 Mill Road, Colchester CO4 5LJ, UK

Registration Fee: £16
Requirements: Any Atari computer

The Big Picture

Andrew Wright introduces a unique competition...

One of the most popular home computing activities these days is image processing. Brought about partly by the widespread availability of decent hand scanners and Kodak's revolutionary PhotoCD system, more and more users can use and manipulate their own images.

This month, to celebrate JCA Europe's newly installed large format print system, we're offering three lucky readers the chance to have one of their own images printed out on the high resolution, professional quality £20,000 colour inkjet system - at giant poster size!

The winner will receive an A0 print of his/her image (roughly 4 feet by 3 feet) and the two runners up will get A1 prints (3 feet by 2 feet). An A0 print would normally cost £65 and the A1 print £40 but even this is much cheaper than most other commercial systems. I've seen a sample provided by JCA and believe me the print quality is outstanding.

Imagine that superb photograph of yourself and your girlfriend taking up most of your bedroom wall? Or the whole family at your wedding? Or junior's first smile? If you really want to be adventurous, how about using software like TrueImage to cheat a little? Now wouldn't you just love a four foot wide picture of yourself sunning yourself in paradise? With a suitably famous Hollywood star sitting next to you, of course. You're only limited by your imagination!

Use text on top of an image to create a stylish poster.

Remember that boring day at the seaside?

Ideas

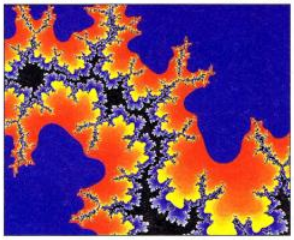
Here's a few ideas. Scan your favourite image or have one put on PhotoCD. Then use the masking features in your image editing program (DA's Picture or True Image, for example) to replace the background. You can also use the cloning or stamp features to remove bits of an image too.

Or how about that raytraced picture you spent so long doing? Why not submit that? Or the psychedelic fractal you use as your desktop background? As long as it's original, you can submit it for the competition.

If you're stuck for ideas, why not tune in next month for our image processing tutorial and feature? We'll show you some tips and tricks to get those images tuned to perfection. And you'll still have time to work on your image once you get issue 7 because the closing date for entries is the 20th of October with the winners being announced in issue 8 (on sale mid November).

Although the JCA print system is capable of excellent dithering, in the interests of quality we recommend you use as high a resolution as possible. For photographic images, the JPEG format will probably work best as it can compress huge images to a reasonable size.

Why not make it a bit more adventurous?



Fractals make fascinating viewing.

Some rules

All you have to do is come up with an original image or montage of images, ones you either own the copyright to or which come from a royalty free collection. The editor will choose those which, in his opinion, are the most original and demonstrate the best use of colour and/or text. In this respect the editor's decision is final. Note that the image can be a scanned photograph or any computer generated image in either TIFF, JPEG or GIF format.

Images must be sent to Atari World (see page 98 for the address) in the above mentioned formats on one or more 720K disks. Although JCA will normally accept over 30 formats, these are the only ones acceptable for this competition.

Outline the steps you took to get the image just the way you wanted it. If you enhance or edit the image provide brief details of how you did it. You can include the originals too if this helps explain what you've achieved.

No correspondence will be entered into and winners will be notified by post or telephone at the editor's discretion. The competition is not open to employees of Specialist Magazines Ltd or freelance contributors to the magazine.

C-LAB
FALCON MK I

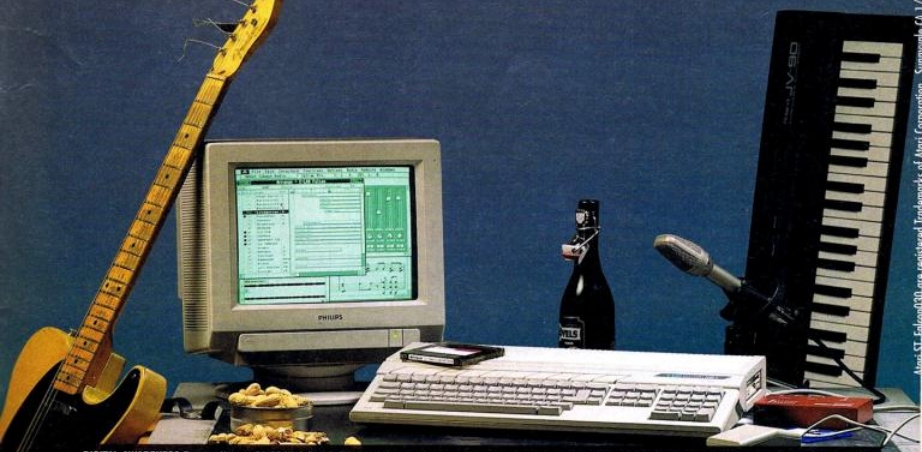
The really great news is...

...that the C-Lab Falcon MKI will now start at £799 with a 4meg machine which will be ideal for use with Steinberg's Cubase Score or E-Magic Logic (at twice the speed of the ST's) and any other Falcon compatible software. It will also come with a Desk Accessory program which allows the DSP audio circuitry of the Falcon to be used for stereo effects and graphic equalisation while a MIDI sequencer is running.

ATARI FALCON-LICENCE TO C-LAB 15.11.1994
DONE DEAL
FOR DEDICATED PRODUCTS IN MUSIC AND PRO AUDIO WORLDWIDE

Although there is no hard drive in this computer to record audio to, the computer will still be optimised for and tested with Cubase Audio. All that is needed is a suitable drive and from now on, C-Lab will be supplying their 270meg Syquest drive with Cubase Audio 16 pre-installed and a demo song on the free cartridge. The drive has been tested with both 8 track and 16 track mode in Cubase Audio 16.

For further details, contact your nearest C-Lab dealer or Digital Awareness at the address below.



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DIGITAL AWARENESS Eurotec House, 31-35 High Road, Chadwell Heath, Essex RM6 6QW, Tel: 0181 598 8081, Fax: 0181 598 8984, Email: digit_aware@cix.compulink.co.uk

Hidden GEM

Andrew Wright looks at the full release version of Gemulator 4.0, the ST emulator for the PC.

There's a certain irony in the fact that one of the first ever applications for Microsoft's new 32-bit operating system, Windows 95, was written by an Atari developer. What's even more amusing is that the application itself is an Atari emulator.

Many readers will remember the original Gemulator. It was originally a DOS program but with a certain amount of tweaking it could be persuaded to run under Windows 3.1. However, version 4.0 is slap bang up-to-date and this little baby runs under Microsoft's brand new 32-bit PC operating system, Windows 95. Accoording to the documentation and earlier adverts, Gemulator should run under Windows 3.1 with the Win32S extensions and OS/2 Warp too. While it works with the former (though not fully), it doesn't work with the latter at all.

In addition to Windows 95, to run Gemulator you need a 486 or Pentium PC with at least 8Mbs of RAM. You also need plenty of hard disk space for virtual memory. The Gemulator consist of hardware and software elements. The former is a small 8-bit card that contains the genuine TOS ROMs and the latter is the software to drive it and carry out the emulation process. The card doesn't need to be assigned an interrupt (IRQ) to itself and it only requires a unique ROM address selected from a bank of dip switches. The upshot of it all is that there won't be many PCs that the Gemulator won't fit into.

On the card

One interesting feature is that there is space on the Gemulator board for more than one set of ROMs. In fact up to four sets can be installed, provided they are two chip sets of either TOS 1.0, 1.2, 1.4, 1.6x or 2.06. With the latter two you can emulate an STe and with the former an ordinary ST. Only the TOS 2.06 ROMs can be sourced these days (Compo will sell you the bare chips for £29.95). If you want the earlier ones, you'll have to look at the small ads or search out some old, broken STs.

The Gemulator software is a small executable (*.EXE) file that can be placed anywhere on your PC's hard disk and because it is a native Windows 95 program, it can use any of the peripherals attached to your PC. As a byproduct, it means you can use non-SCSI CD ROM drives, magneto-opticals, SyQuests and all the rest as long as they're properly installed in the PC. In short, if the PC can use it, so can the Gemulator.

This does bring in one particular problem — the Gemulator needs to use the PC's floppy disk drive but it does so using Microsoft routines. This means that it won't read some ST formatted floppies, especially if they have been formatted using early versions of TOS or use extended formats. The best way round the problem is to format disk on the PC and copy the files across on a real Atari. This a big drawback if you happen to have a large disk collection.

The advantage in being a native 32-bit application is that Gemulator can multitask quite happily and you can open as many copies of the program as will fit in memory. This means that in theory you can convert a batch of images in one "virtual" ST, raytrace in another and write up your results in a third. Practically this is a bit of a non-starter - Gemulator is a software emulator so it isn't particularly fast at the best of times and if you run three copies at once, even a Pentium PC will slow to a crawl.

I feel the need

So what speed do you get? Don't expect to get an ST cracking along at the same speed as a Pentium. In general terms - according to GEMBench - a 486 DX2/66MHz PC will give you somewhere close to the performance of a Mega STe and a 90MHz Pentium offers roughly TT performance.

Gemulator uses a few tweaks to improve the display speed if you don't have NVDI or Warp 9. You can specify fast text and graphics when configuring Gemulator so that it patches the slower parts of the ROM in the same way as NVDI and Warp 9. You can also take advantage of high speed serial ports for communications if your PC happens to have them fitted. This means that with the right Atari software you can transfer data at speeds up to 115,200 baud.

Gemulator 4.0 even includes MIDI and joystick support, provided you have the right hardware inside your PC. At present it hasn't been fully implemented because the

final release version of Windows 95 has yet to appeared.

As the PC and ST keyboards are very similar there will be little difficulty getting applications set up and there are only three keys that need translating. Page Down becomes the Atari Undo key, Page Up the Help key and Home is the Atari Clr Home key.

Several useful key presses are provided for Gemulator users, using the F11 and F12 keys that can't be interpreted by Atari software. Ctrl-F11 brings up a popup menu of options while Alt-F11 brings up the properties dialogue box. Ctrl-F12 causes a reboot, no matter what you're doing at the time and Shift-F12 toggles between mono and colour with a quick reboot. The mouse is bound to cause trouble — let's face it you have two different mouse pointers, one for Windows and the other for GEM. Gemulator gets round this very neatly by using the F11 key to switch between modes.

Verdict

What will Gemulator do for you? First of all, let's make it clear that a Gemulator can never replace a real Atari. For a start it doesn't run many games at all despite it's support for joysticks. What's more we tried it on two well-proven PCs and the sound didn't work at all. Not a jot, despite having industry standard PC sound cards installed.

A number of programs also fail completely in any resolution for various reasons — DA's Picture runs but jumbles the image for example. Many others like Home Accounts 2 and Stormtracker simply bomb out. Another sizeable selection won't run in the extended resolutions, largely because of excessively rigid GEM programming.

However, the majority of cleanly-written modern programs that simply write to the screen will run without problems — Imagecopy 4, Calamus, Arabesque and That's Write 3 worked faultlessly but there were problems with a few others. I couldn't get a single game to work (and I tried a dozen or more) and Timeworks 2 fell at the first hurdle as Gemulator didn't believe I'd inserted the correct master disk. Regrettably Easy Text Pro didn't complete the installation either, so I have some serious doubts about GDOS compatibility. Most utilities that don't mess about with the hardware should work fine — the file selector Selectric and most desk accessories are a case in point.

The biggest problem is that PCs fails to read ST disks reliably. They always have done and they always will. Whether this is serious depends on your point of view. If you have a big collection of programs you could be faced with many evenings' work just transferring them across. The most depressing thing is that you just don't know why you can't get such and such a program to work. Is it a disk problem? Is it a minor incompatibility? Or is it an Auto folder or desk accessory conflict? Shall I disable that and try it with this?

One can't help the gut feeling of admiration for the programmer who's achieved so much. For an emulator it's reasonably compatible, fast enough to be usable and cheap to buy. But the display problems, the disk incompatibilities, the manuals' doubtful claims to support sound and the general feeling of sluggishness (despite the respectable GEMBench figures) make it a buying decision that's far from clear cut.

The big picture

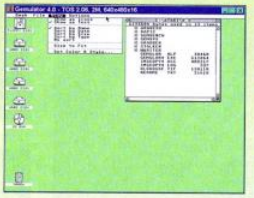
Gemulator comes with VGAWIN.PRG, a clever little utility that patches TOS to provide support for higher resolutions. This means you can run Gemulator in various resolutions, from 640 by 480, through 800 by 600 and 1024 by 768, all the way up to 1600 by 1200 if your graphics card and monitor will play ball. You can access these resolutions in either mono or 16 colours and the extended resolutions are accessed at boot time when VGAWIN.PRG is placed in the Auto folder on drive C.

You lose compatibility with some Atari software, of course, but most of the heavyweight programs like Pagestream and Calamus are well used to these resolutions. For word processing and DTP, they are a big bonus and you can always switch to standard ST resolutions for other programs.

Gemulator has another handy trick up its sleeve. You can select zoom colour modes so that ST low and ST medium resolutions are expanded to fill the same screen area as ST high (640 by 400). This means that you can fill almost the entire screen in low or medium resolutions when running at the PC's lowest resolution of 640 by 480.

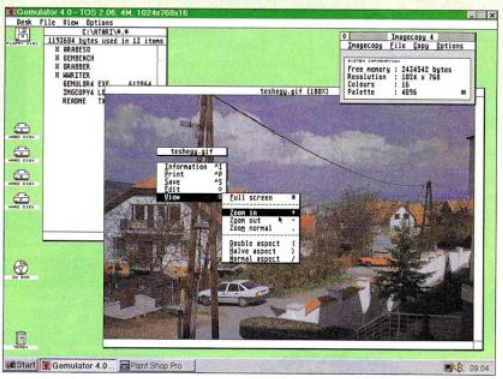
Unfortunately there's a big problem when you use the extended resolutions with VGAWIN.PRG. TOS 2.0x and earlier versions use the 8 by 8 system font in normal ST colour modes but when the resolution is increased the same 8 by 8 font looks rather squashed. OK, horribly squashed. Later versions of TOS adapt quite happily by switching to the 8 by 16 font but that's not much use to Gemulator users.

Happily we found a way round it — thanks to some blood, sweat and tears from handyman Joe Connor. NVDI 2.51 or higher will solve the problem but only if it sees a Falcon NEWDESK.INF file in the root directory. Now if you haven't got a Falcon you're stuffed, but at least we've squeezed one onto the reader disk for you. Just in case...



The squashed 8 by 8 font makes high resolutions almost unusable.

Thanks to NVDI (and a Falcon NEWDESK.INF file!) the 8 by 16 font can be accessed.



The Gemulator running in 1024 by 768 mode — great for DTP and the like.

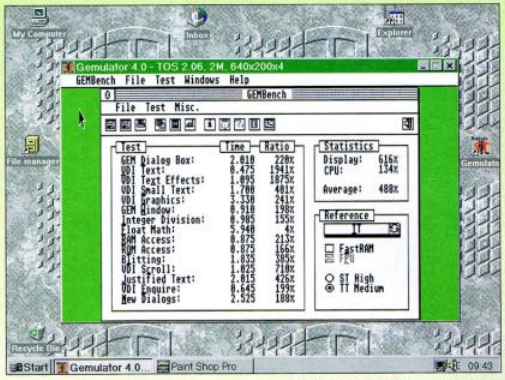
The Janus

Gemulator does have some competition in the form of the Janus card. The Janus card is essentially an Atari Mega STe on a plug-in 16-bit card that will fit in almost any PC. It's not a software emulator at all although the performance figures do depend on the PC's peripherals to some extent.

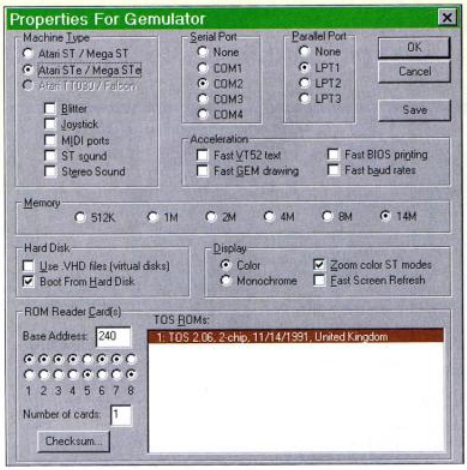
On the card is a 16MHz Motorola 68000 chip and two 30 pin SIMM slots for dedicated ST memory up to 32MB (although the Janus will use only 14Mb). Also on the card are two TOS 2.06 ROMs and it only works with this version of TOS.

The Janus will operate in either ST high (640 by 400 in monochrome) or higher screen resolutions up to 1280 by 1024 in 16 colours. There is no ST low or medium emulation. Even on a Pentium the card is only as fast as a slightly superior Mega STe but at least it is perfectly possible to run it on an obsolete 386 with 1Mb of RAM without much loss of performance

There's no support for MIDI or sound but the main drawback has to be the price. At £299 it's hardly a snip and despite the imminent release of a 68200 version clocked at 25MHz, it's a little pricey. As they say, you pays you're money and takes your choice...



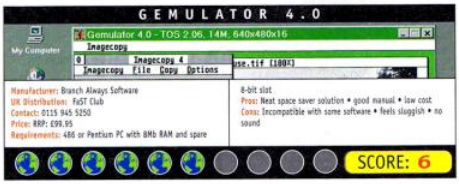
GEMBench shows that Gemulator on a Pentium 90 is substantially faster than an STe.



Gemulator's properties dialogue — it's nothing if not configurable.

The Gemulator menu can be called up at any time.

Three copies of Gemulator running at once — it's like having three ST's on your desktop



Inside out

In the first in a series of in-depth articles describing the workings of the ST, hardware expert Paul Rossiter looks at the platform's history and its video capabilities.

Many new users of the ST are interested in the history of the ST and its development. It was originally conceived by Jack Tramiel, the former boss of Commodore in the early 1980s. The ST was designed to take on Apple and deliver a powerful home computer at a (then) very low price.

Indeed, one of Jack's favourite sayings of the time was "power without the price". Based on the ubiquitous 68000 microprocessor from Motorola which was an immensely superior chip to the Intel 8086, the ST promised speed, quality and power in a small compact case. This, together with its modern graphical operating system, was a tremendous success and it sold many millions. Even today, for many applications, the humble ST is still a very useful, versatile machine which is capable of handling most everyday tasks - certainly it will do them a lot better than a 10 year old PC can!

When Apple boffins visited Xerox's research centre at Palo Alto in California they realised that the future of computing was in the provision of a graphical environment so that day to day file and disk operations could be carried out using simple analogies - dragging a file to a trashcan for example.

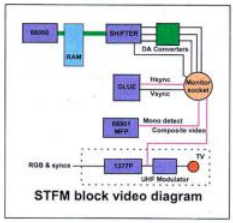
Atari's operating systems owe a lot to Digital Research (now part of worldwide software giant WordPerfect/Novell).

Apple's first attempt, the Lisa, was a disaster but they quickly bought out their first Macintosh and with its built in mouse support and graphical environment, the computing world was turned upside down.

Atari realised there was a tremendous market for an affordable Mac style computer and so the ST was born in 1985, with some pundits terming it the "Jackintosh". The operating system of the ST (GEM) was licensed from Digital Research and it was so similar to the Mac that Apple took legal action against Digital Research. The later versions of GEM were forced to have fixed size windows and no trash can but fortunately they never appeared on the ST. Even Microsoft fell foul of Apple lawyers as well which is why there is no trash can in Windows!

Power to the ST

The first ST had an external power supply, external floppy disk drive and no TV modulator. It was usually bundled with the excellent SM124 mono-chrome monitor and it created quite a cult following as it was so far ahead of the BBC and Spectrum micros which were the main sellers at that time. Don't forget that most of the competition were still using cassette tapes for storage,



STFM block video diagram

The STFM's video block.

could only display 40 columns of text and had a maximum of 64K of RAM. Those were the days of the true hobbyist!

In 1986 the 1040 STF was introduced, complete with internal double sided disk drive and a full one meg of memory. This was advertised as the first ever computer with 1000K at less than £1000. For the serious business user the Atari Mega was introduced. This came in a two box layout and offered up to 4MB of RAM, a fan, a "blitter" chip, an expansion bus and a range of peripherals to suit such as the Megafile hard drives and SLM804 laser printer.

Eventually, in the late 80s, the Atari STe was released, offering analogue joystick

ports, memory SIMMs, stereo sound, and a blitter as standard but little else. It was originally intended as an upgrade path for existing users as well as a new machine but programmers were very slow to write specifically for the "e". This was mainly because of the compatibility problems which would have meant that owners of earlier models like the STFM couldn't run the new software. When the STe was first launched, a surprisingly high number of programs wouldn't run on it at all - far more, in percentage terms, than refused to run on the Falcon some years later.

By this time of course, Jack had handed over control to his sons who lacked the business acumen of their father and after a series of mistakes (the Stacey, ST Book, CD ROM) and misreading the market, Atari eventually called a halt to the ST's development.

The remainder of the Atari range was never marketed aggressively and never sold in sufficient numbers for them to be much more than curiosities. The TT, a powerful 68030 based behemoth, the Mega STe offering modern looks, more speed and an internal hard drive and, of course, the Falcon with its 68030, its DSP chips and its extensive video modes, probably only sold a few thousand between them.

video is simply a movable 32K section of it. To light a pixel on the screen, a programmer simply has to write to a memory location. Directly mapped video is simple but has a performance penalty as the memory has to be continuously addressed by the video circuitry to keep displaying the picture, thus reducing the performance of the system.

STFM video

The base ST uses a special chip called the "Shifter" to control the video signals. The shifter takes in data from the main memory 16 bits at a time and converts it into three channels of serial data (one for red, one for green and one for blue). Each channel has eight levels of intensity and this gives a potential palette of 8 by 8 by 8 = 512 colours.

The digital outputs from the shifter are converted into analogue by a resistor network, buffered and then fed to the monitor socket. The GLUE chip, another Atari designed special chip provides the timing signals (horizontal and vertical sync) for the video display. The colour display uses timing signals the same as the television signals resulting in a horizontal scan rate of 15625HZ and a vertical rate of 50/60Hz.

The monochrome monitor uses special high synchronisation rates (31000Hz and 70Hz) which could damage a TV or colour monitor and so high resolution cannot be selected from the desktop. If a monochrome monitor is plugged in, a special line (monochrome detect) on the 68901 MFP chip is connected to ground. This then raises a high priority interrupt and the whole system reboots into high resolution.

Not every ST owner is fortunate to have a dedicated monitor and many have to make do with a television. The ST has a built in modulator to provide a UHF signal and also a composite video signal for much better quality on TVs equipped with a SCART socket.

STe video

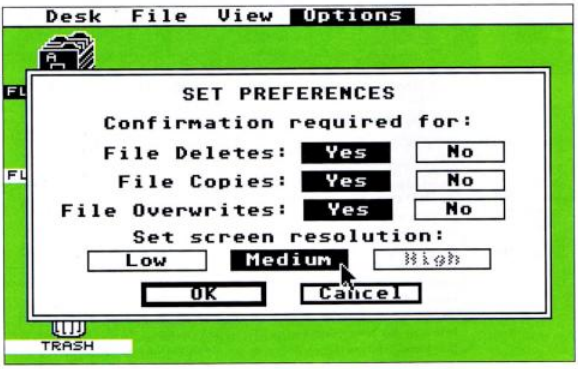
The circuitry for the STe was redesigned and the video circuitry is incorporated in a new shifter chip which also helps control the audio side. This is an 84 pin PLCC device. The major difference is that the STe has four bits of information for each channel which allows colour selection from a palette of 16 by 16 by 16 = 4096 colours.

The blitter is also standard in the STe , this allows hardware to move blocks of memory around at high speed. The effects of the blitter are most noticeable when moving windows around, but unfortunately the speed increase of the blitter is not as great as promised and the readily available software accelerators such as NVDI can easily outperform it.

TT Video

The TT works in two totally distinct modes, the colour modes and the professional monochrome mode. The colour mode uses a special chip which has the digital to analogue converters built in, while the high resolution monochrome mode uses proprietary ECL chips to give the ultimate in quality but only to a special monitor.

Interestingly the TT has no blitter; it was found that the 68030 at 32MHz could blit in software faster than a hardware device and so was not necessary. The monochrome mode of the TT offers 1280 by 960 pixels which requires a very high bandwidth so to keep the signals as pure as possible the ECL is used. In this dedicated chip, the signals are in a balanced pair and only change from -0.8 to -1.8 volts instead of the usual TTL 0-5V. To use this mode a special monitor is

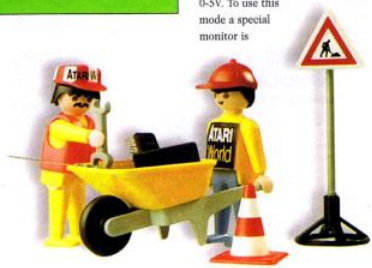


Swapping resolutions – note that high isn't an option.

Video

When the ST was designed the size of the video was settled on at 32K - any larger and the speed of the computer would be too slow, any smaller and the display would be too poor. This memory size allows various choices of resolution and colour (see accompanying panel).

The ST uses directly mapped video memory - in other words the memory in an ST is all in one continuous area and the



required, one that can accept ECL signals and cope with the 120MHz bandwidth.

The colour mode of the TT, while capable of emulating the older ST modes, displays them all in a much higher quality on a PC style VGA monitor.

Faults

The video circuitry in the ST is very stable and reliable; any faults are often caused by external spikes getting into the machine. In an STFM the GLUE chip is easily blown resulting in a picture with no synchronisation and similarly in an STe the MCU can be blown by the same spikes.

Television problems include missing colours, no sound or a monochrome picture and the cause here is either a defective MC1772P composite video encoder or the actual modulator itself.

Monitor port connectionsSocket/Signal

1. Audio out
2. Composite video
3. General purpose output
4. Monochrome detect
5. Audio input
6. Green
7. Red
8. 12V pull-up
9. HSYNC
10. Blue
11. Mono video out
12. VSYNC
13. Ground

Video Modes

Standard ST/Mega ST

LOW	320 by 200 in 16 colours from a palette of 512
MEDIUM	640 by 200 in 4 colours
HIGH	640 by 400 in 2 colours

STe/Mega STe

LOW	320 by 200 in 16 colours from a palette of 4,096
MEDIUM	640 by 200 in 4 colours
HIGH	640 by 400 in 2 colours

TT

As for ST but additionally:

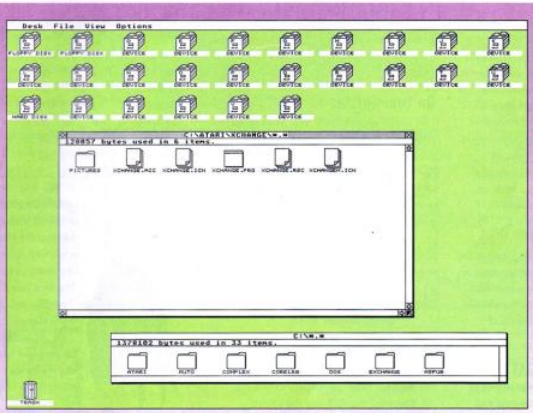
TT LOW	320 by 200 in 256 colours
TT MEDIUM	640 by 200 in 16 colours
TT HIGH	1280 by 960 in 2 colours

Overscan

The enterprising Germans discovered that with a slight change to the Atari's video circuitry the memory used for the video display could be extended to give lots more pixels on the screen in all modes. The signal concerned was the DE line (display enable) - if intercepted and lengthened then up to 50% more pixels can be displayed. There is a performance penalty with the Overscan enabled but for most purposes the larger screen outweighs any performance reduction.

The only problem with this is that some poorly written programs make assumptions about the screen size and so corrupt the screen when presented with more than 640 pixels across. For these programs the Overscan mode is easily switched off to prevent the corruption.

To fit the Overscan a small circuit board is positioned inside the ST, a couple of tracks are cut and ten wires soldered to various places on the ST board. The clear instructions give the connection points for all normal ST board layouts and the entire operation should take no more than an hour. In the STe the DE line is hidden inside a large integrated circuit and so Overscan is not available for the STe. A special version for the TT is also produced and can produce similarly impressive results on that machine.



More pixels mean you get more on screen.

More pixels

To get more pixels on the screen requires some extra hardware. Overscan is virtually free although you'd be well advised to get an expert to fit it for you if you're in doubt. It works remarkably well but to get lots more pixels on large screens an add on graphics card is required. These are unfortunately very expensive and require an expansion slot so they will only fit in a Mega ST, Mega STe or TT machine. The Reflex card from Titan designs is still available second-hand and offers monochrome only at 1024 by 1024 pixels; this can fit in a Mega or an STe with a special adapter.

As the graphics cards are so expensive, a very real alternative for large screen displays is to run a fast PC with a Gemulator. The resolution is then dependant on the PC's graphics card which is usually at least 1024 by 768 in 256 colours.

Sequencing- beyond the manual

Confounded by all those controller numbers? Ian Waugh shows you how to stay in control.

Every sequencer user is happy recording and editing notes - the bread and butter of any sequence - but many hesitate to explore the murky world of controllers. MIDI Continuous Controllers, to give them their full name, are used to modify parameters or switch functions on and off. Common controllers are modulation which usually adds vibrato to a sound, volume and pan.

Like most numeric ranges in MIDI, controllers take values from 0 to 127. To produce a crescendo or diminuendo, for example, you would create a sequence using gradually increasing or decreasing values of controller 7. Although 128 steps may not seem many, it's usually enough to persuade our ears that changes are taking place smoothly.

The most and the least

In some circumstances a greater degree of control may be required so a system was devised in which values could be sent in two parts. These are known as the MSB (Most Significant Byte) and the LSB (Least Significant Byte) and between them can produce 16,384 steps.

In the table you'll see that controllers 32-63 provide the LSB for controllers 0-32. Don't worry if this seems a little complex. In most cases, you only need use the main controller and can ignore the LSB. Originally, controllers 64-69 were designed as switches and are usually used as such. Typically, values between 0-63 would switch off the function while the higher values would switch it on.

Most controllers have an associated MIDI channel so you can apply effects to separate music lines. However, controllers 120-127 have a more global effect. When using a sequencer you generally won't want to set MIDI modes.

On the register

One aspect of controllers which can appear puzzling is registered and non-registered parameter numbers - RPNs and NRPNs. These allow a degree of control over certain aspects of an instrument. The NRPNs are not standardised and can control different parameters on different instruments.

The RPNs are standardised, however, and can be used to control five parameters:

0 Pitch bend sensitivity
1 Fine Tuning
2 Coarse tuning
3 Tuning program select
4 Tuning bank select

To set one of these, you must use the RPN to select the parameter and then write the required value using controllers 6 and 38. These are the MSB and the LSB of the data entry controller. We'll see how we can use this to set the pitch bend sensitivity.

Pitch bend

Pitch bend is not one of MIDI's 128 controllers but a MIDI message in its own right although you use controller messages to set the pitch bend range. In fact, it's a good idea to do this at the start of a sequence to make sure the receiving instrument responds in the right way. If the pitch bend range is set to two semitones but the data is expecting it to be set to an octave you'll soon hear the difference!

You need to enter six lines in your event editor. Space them out by a few ticks.

Message	1st	2nd	Description
Pitch bend	1	64	Centre pitch bend
Control 1	101	0	RPN MSB
Control 1	100	0	RPN LSB
Control 1	6	2	Pitch bend to 2 semitones
Control 1	101	127	RPN MSB
Control 1	101	127	RPN LSB

The first entry, the pitch bend message, centres the pitch bend control. The next two RPNs with a value of 0 tell the system that you are about to change the pitch bend sensitivity. Controller 6 (data entry) sets the sensitivity in semitones - in this case to 2. The final two RPNs lock the setting so if you twiddle with the data entry slider you won't change the pitch bend range.

If you've been following closely - which I'm sure you have - you may be wondering why we haven't included controller 38 which is the LSB value for controller 6. Well strictly, perhaps, we should but it's standard practise just to use the MSB if you don't need the extra resolution - the 16,384 steps we mentioned earlier.

Instant honky

You can make an instrument sound out-of-tune effect by setting the pitch bend range to values higher or lower than 64. Play the same music line on two MIDI channels, each set to a piano sound. On one channel try different values of pitch bend.

With a range of two semitones, a value of 74 produces a good honky tonk sound. Lower values produce a sort of chorus effect. You could, of course use the RPNs to adjust the tuning directly.

Recording controllers

You don't have to record controller data at the same time as you record notes. If you're adept at playing live you may well find it more natural to twiddle the pitch bend or modulation wheel as you play but you can record this data separately. Select a track and set it to the same MIDI channel as the music data you want to affect. When you record, the twiddles will affect the data.

This method keeps the controller data separate from the note data making it easier to edit (although many sequencers have a filter that let you see the controller data without it being obscured by the notes and vice versa). It also allows you to record several takes so if the notes are right but you didn't push the Mod wheel up far enough, you can have another go.

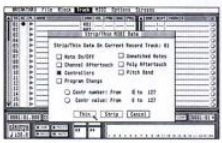
RAM raiders

If you do a lot of twiddling with pitch bend and modulation wheels, it's very easy to generate large amounts of controller data which can eat up memory. In extreme cases it can cause MIDI delay problems as the system tries to process all the messages.

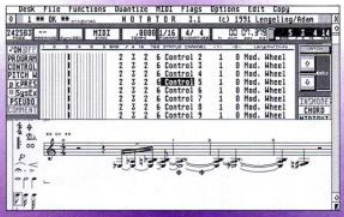
Some sequencers have a Thin Controller function which reduces the amount of data in a sequence. You can remove quite a lot of controller information without noticeably altering the music.

There's a lot more to say about using controllers and we may come back to it later in the series. Meanwhile if there is any aspect of controllers or, indeed, any area of sequencing which is causing you problems or which you'd like more information about, drop me a line and I'll try to tackle it in a future column.

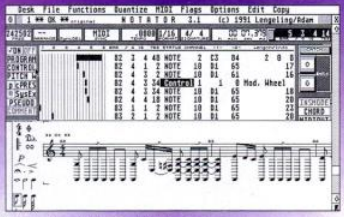
Cubase has a Reduce Controller Data function to help reduce those memory-hogging controllers.



Breaktrhu has a Thin/Strip MIDI Data function which can help ease controller overload problems.

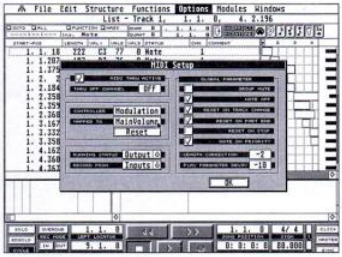


The editor in Notator shows how easy it is to generate lots of superfluous controller data with the Modulation wheel.



You can enter controller data in Notator by dragging the CONTROL box on the left into the editor.

Cubase lets you view and edit a number of controller types in the Key editor.



Cubase includes some sophisticated controller mapping functions. Here Modulation is being used to control Volume.

Control Change Numbers

0 Bank select MSB
1 Modulation
2 Breath control
3 Undefined
4 Foot control
5 Portamento time
6 Data MSB (slider)
7 Volume
8 Balance
9 Undefined
10 Pan
11 Expression
12 Effect control 1
13 Effect control 2
14-15 Undefined
16-19 General purpose 1-4
20-31 Undefined
32 Bank select LSB
33-63 LSB for controllers 1-31
64 Damper/Sustain pedal
65 Portamento
66 Sostenuto
67 Soft pedal
68 Legato
69 Hold 2
70 Sound control 1/variation
71 Sound control 2/timbre
72 Sound control 3/release time
73 Sound control 4/attack time
74 Sound control 5/brightness
75 Sound control 6
76 Sound control 7
77 Sound control 8
78 Sound control 9
79 Sound control 10
80-83 General purpose 5-8
84 Portamento control
85-90 Undefined
91 Effect depth
92 Tremolo depth
93 Chorus depth
94 Celeste detune depth
95 Phaser depth
96 Data increment
97 Data decrement
98 Non-registered parameter LSB
99 Non-registered parameter MSB
100 Registered parameter LSB
101 Registered parameter MSB
102-119 Undefined
120 All sound off
121 Reset all controllers
122 Local control
123 All notes off
124 Omni mode off
125 Omni mode on
126 Mono mode on
127 Poly mode on

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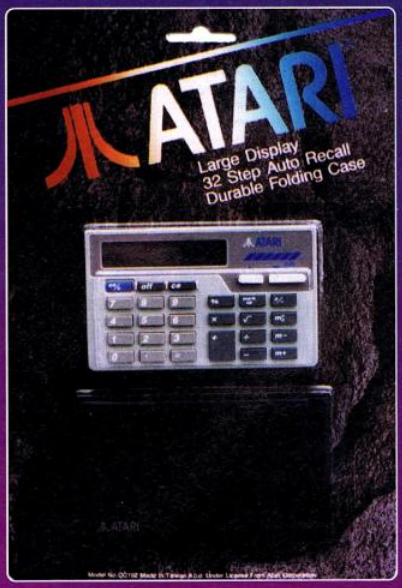

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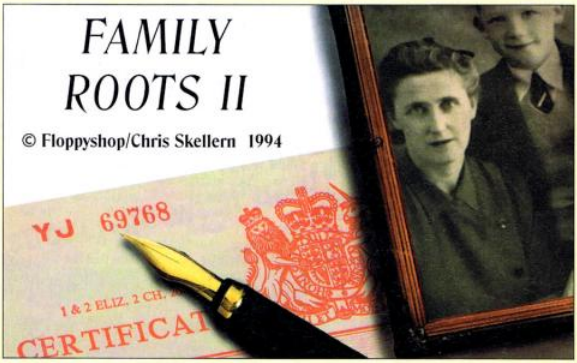
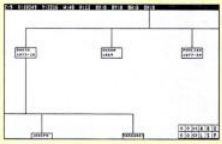
Family Roots II

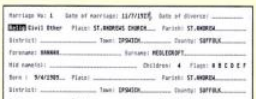
Family Roots II is an aid to those researching their family tree. Genealogy is a subject which intrigues most of us but a shortage of professional software and in some cases, extortionate prices, puts most people off getting started. The combination of five years' accumulated work (which has included extensive research into the subject) combined with a tempting £25 price tag, makes Family Roots II the ideal choice for the professional genealogist whilst keeping it within the price range of the amateur. For those who are not familiar with the original release, Family Roots is a program designed to assist those of us who indulge in the pursuit of tracing our ancestry or 'family tree'. Unlike similar products, Family Roots is not merely a customised database. It allows the user to link each individual into the family tree graphically on the workscreen, whilst allowing easy access to its integrated database where the information on each individual is stored.

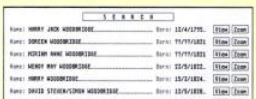




Our popular custom written mouse driven interface makes the program easy to use for the beginner, whilst giving access to more powerful features needed by experienced genealogists. Another unique feature of our software is that new individuals can be added to any part of the tree. In other words, you do not have to define a starting point and work forwards. You can add new individuals anywhere within the tree structure and all existing data is cross linked to take into account the new individual's relationship to everyone else in the tree. You can even start an unlinked tree on the workbench, which is separate from the main tree and link it in when you have completed your research and found out at exactly which point it fits in. A powerful search function allows fast cross referencing between individuals.

Family Roots II is fast and extremely economical in use of both memory and disk space. This in part is due to the fact that it is written in 100% assembly language. It is envisaged that an average user with a 520 ST will be able to store details of 100,000 individuals on a double sided disk! We have several users who already have over 2,000 individuals entered into Family Roots.





Family Roots II is a major upgrade on the original release and has already become the leader in its field. The package comes with an easy to follow fully illustrated manual and supports print out to 9-pin, 24-pin, Bubblejet, Deskjet and Laserjet printers. Family Roots II is available now for £25 + P&P (UK free, Europe £1.50, rest of world £3.00). A usable demo version is available for only £1.00. Overseas customers please note that payment must be made in UK currency (cheque drawn on a UK bank is recommended).

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Big is beautiful!

It's my pleasure to welcome you to issue six of ST Source — the mugshot on the masthead may have changed, but the concept behind this haven for beginners has not. I am sure you will continue to help us to help you by suggesting what you'd like to see within these pages. We're always open to ideas, and in fact, this month's ST Source owes its existence to your letters. Each month, we are bombarded with queries on all manner of Atari-related subjects, but some questions crop up time and time again: Which paint program should I buy? What's the trick behind formatting a disk? And the old favourite, how can I persuade my desktop publisher or word processor to produce big text?

The ST Source you are about to read is devoted to that very topic. We're taking it from the top, examining in detail the whole idea of large text, from installing new fonts in Timeworks right through to actually using them in a practical setting (a poster for a jumble sale to be precise). Other packages capable of bold headlines will also be explored. I hope that we can tickle your imagination and help you to exploit the full power of your word processing and DTP software...

Nial Grimes, Features editor

Think Big!

You can create posters on your ST! Nial Grimes scales the font mountain and shows you how to produce some seriously monstrous text...

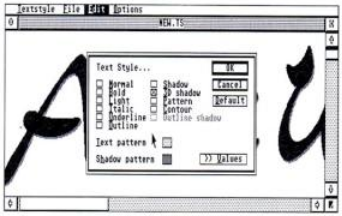
Picture the scene - you've been asked to design a poster for the local motorcycle club; you rush home, only to find that your desktop publisher offers nothing better than a 36-point Swiss or Times font. Hardly the sort of thing dreams are made of!

There are lots of good reasons for wanting to use big text and interesting fonts - letter headings, posters and logos all benefit tremendously from the clarity of larger type sizes and it can mean the difference between getting your message across and being ignored. Not all software packages make it easy to stretch beyond the standard 36-point typeface but don't despair - there are simple ways to break the barrier.

There are essentially three methods of producing large text with the help your ST: you can use a utility in conjunction with a desktop publisher or word processor, you can add some larger fonts to your chosen package, or go the whole hog and opt for a package that works exclusively with scalable fonts. Let's take a closer look at the benefits and disadvantages of these three options...

A good image!

For many, large text is not an everyday need - a headline here or an effect there every so often is all that's required. If you find yourself in that situation, there's little point in spending vast amounts of money on overkill software. Instead, it's a better idea to look at utilities that can enhance your current package - Textstyle for instance. This nifty utility will happily load a Calamus font, allow you to create a neat looking headline and then save the results as an image file that loads into almost any desktop publisher and many word processors.

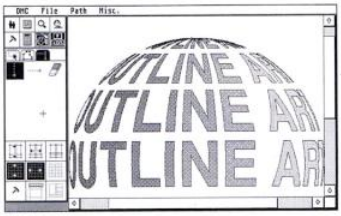


Textstyle produces high resolution, bitmapped images using Calamus vector fonts - got all that?

If your wallet simply can't take the strain of a commercial package, there are even cheaper alternatives. In fact, some public domain programs offer textual abilities. Public Painter is especially good at effects and can save standard IMG files that can be loaded into a staggering number of applications.

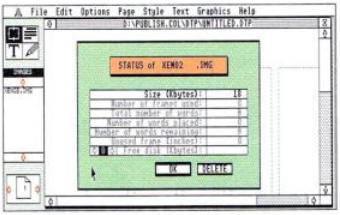
A slightly sneakier method is to use demo versions of commercial applications - a logo created with Outline Art can be grabbed from the screen (with Imagecopy or similar) and squirted into your desktop publisher. The results will be a little jagged unless you reduce the size considerably, but it gets the job done without having to delve into the realms of GDOS and ASSIGN.SYS files.

Even more ingenious is the "vector" font supplied by zzSoft - it includes a full alphabet of characters in GEM format, which can be loaded letter by letter and arranged into a large, smooth headline.



With the help of a screen grabber you can pinch effects from the demo version of Outline Art.

Using these "text images" is an affordable and very easy way to get some large type and special effects onto your screen. However, you need to know exactly what you want before you even think about loading the desktop publisher and by using any significant number of headlines, you are ramping up the amount of memory and disk space needed for a document.



High resolution images eat memory — go easy on those Textstyle logos and headings!

A bitmap on the side...

A more versatile approach is to install some extra fonts in your word processor or desktop publisher. Most packages are flexible enough to be treated in this way, although the method varies depending on the software you are using. Last month, we examined how to install extra GDOS fonts and similarly, you can add larger fonts to packages such as That's Write or Papyrus (in its Signum guise). Once seated properly, they work in exactly the same way as your regular fonts — posters here we come! Some packages will also scale a bitmapped font; for instance, Timeworks offers to double a 36-point specimen to 72-points.

Sourcing fonts can be a bit of a nightmare. Although plenty are available in the public domain, finding the right style in the right size for the correct printer can often be difficult. If you do find yourself struggling to come up with the goods, then it's well worth investing in C-Font, which will load any Calamus typeface and produce a custom GDOS or That's Write font. Remember, you're not actually getting the flexibility of scalable fonts here - C-Font is simply producing a single point size from the outline description.

There are two main problems that you will face when wrestling with extra bitmapped fonts. The first is memory shortage, and the severity of the problems depends entirely on the quality of your printer. Bear in mind that each printer font must be loaded into memory before it can be used at the output stage — a font designed for a low-resolution dot matrix printer will demand a relatively small amount of space, but the same cannot be said if you are using a 300 dpi inkjet. You can get away with installing an extra 36-pointer on almost any machine, given a little trimming, but if your ambitions stretch further, it's time to consider a memory upgrade.

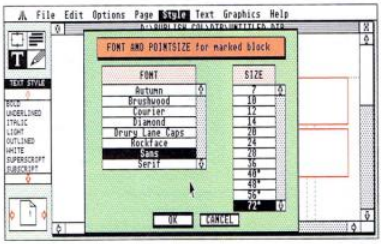
A second consideration is that you are at the mercy of your chosen package when it comes to special effects and you are still limited as far as point sizes are concerned. That being the case, you might find yourself using both extra fonts and a utility such as Textstyle to add impact to your creations.

Vector vibes...

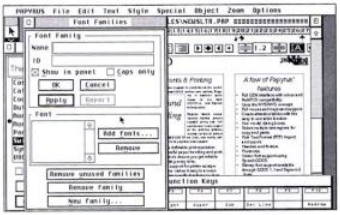
If you find yourself using a lot of large type or effects, then the only sensible choice is a desktop publisher or word processor that can deal with vector (or scalable) fonts. This removes the need to worry about point sizes altogether, as the software can create almost any size instantly from a single description. By their nature, scalable fonts can also be rotated easily and that's a feature offered by most of the packages on the market...

Choosing the right application for the job all comes down to your ST system and the amount of memory lurking beneath the casing. Calamus 1.09n is unique in its ability to run with a small amount of memory and still provide vector fonts. Believe it or not, you can do an awful lot with a one megabyte machine, to the point of filling a whole page with a single letter!

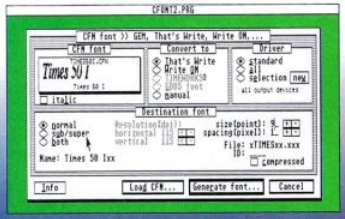
PageStream 2 and desktop publishers that can use Speedo (Timeworks 2.04 and Easy Text Vector) demand a little more memory, but offer similar flexibility in allowing you to choose any reasonable point size. PageStream's ability to stretch text non-proportionally is especially handy for



The largest installed point size is 36 points — Timeworks scales this font to 72 points.



Extra bitmapped fonts can be easily added to applications such as Papyrus and That's Write.



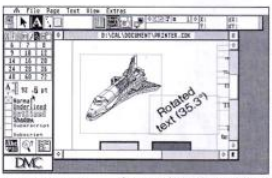
Font production is easy with C-Font - just load up a Calamus font and enter a reasonable point size!

High-end desktop publishers gobble a lot of memory but reward you with scalable fonts and numerous effects.

slipping headlines into place.

The power of Speedo-driven word processors should not be underestimated either — again you are looking at two megabytes of memory minimum, but the effects you can achieve with Atari Works, and to a greater degree Papyrus, can be quite remarkable and there's no doubting the quality of the fonts.

More powerful desktop publishing packages are less forgiving -Calamus SL and DA's Layout demand lots of memory (four megabytes is desirable in either case) but reward you with a greater range of text effects and an awful lot more features in other areas. Scalable fonts just live to be printed at large type-sizes, so the only drawback is the amount of memory to run some of these sophisticated applications in the first place.



Calamus 1.09n runs well on a one megabyte, mono ST system and boasts a scalable font system.

Up and away!

Yes, large text can be a reality on your own Atari, be it a one megabyte ST or a RAM-packed Falcon. A small purchase such as Textstyle can immediately open up your options as far as posters and letter headings are concerned. By combining a few extra fonts with some Textstyle logos you can create some very impressive work on a relatively basic ST system.

PageStream 2's ability to stretch text is marvellous for posters and striking headlines.

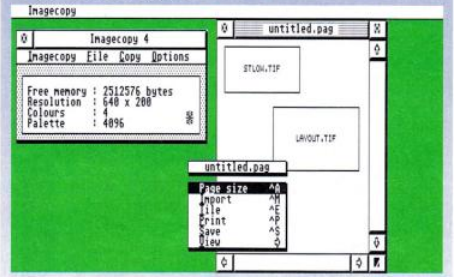
Don't be put off by the wiles of GDOS, or the price of higher-end packages. Start gradually and find a good compromise between what you want and what your ST can provide - you'll be surprised at just what you can achieve!

Spot the difference

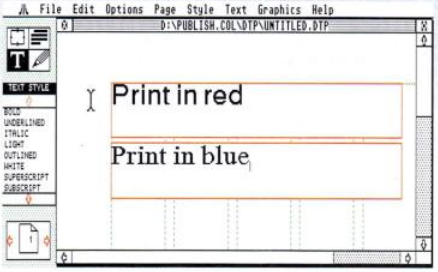
A splash of colour can add enormous impact to a document, but you need to spend quite a lot of money to get a package that will produce full colour, desktop published output. However, basic colour can be added with virtually any package, given a bit of elbow grease and small dollop of ingenuity.

Let's say you'd like to have a bold, blue headline at the top of your poster for the village fete. Simply split the design into the parts you'd like printed blue, and those you'd like printed black and switch your printer ribbon or cartridge accordingly. It may sound like a lot of fuss, but I think you'll find that the results more than compensate for the minor discomfort. Of course, you can repeat the process, adding as many "spot" colours as your printer (or good taste) can stand.

Imagecopy 4 can also come in very handy, given its newfound layout abilities — simply design your document in Timeworks, making a note of the exactly where you want the logos and pictures, and then run the page through the printer a second time and allow Imagecopy to add the missing portions in mono or full colour!



Imagecopy 4's page design facility allows you to overlay colour pictures on a mono document.



By splitting up your document at print time you can create primitive spot-colour effects.

Vector recap...

It's very important to understand the difference between vector and bitmapped font when talking about large text. The basic idea is that bitmapped are drawn (as pictures if you like) in predefined sizes; blow them up and you'll suffer the jagged consequences!

Scalable fonts on the other hand are device independent. It's the difference between asking someone to colour in particular squares on a piece of graph paper to create a circle, and simply asking them to draw a circle. The characters in a scalable (or vector) font are just more complex versions of this latter statement, written in a style that the software can understand. As a result, the characters can be drawn at virtually any size without loss of quality - the computer merely converts (or "rasterises") them into the correct resolution for your printer. All clear? On we go...

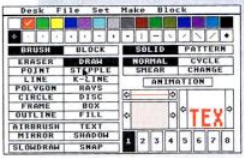
Watch your options...

The applications we've covered in the body of the article are what you might term the "obvious solutions". However there are many, many programs that you can use in helping you to produce effective posters, letter headings and so on.

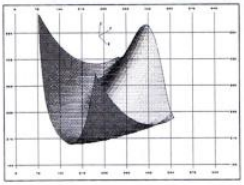
One option that you might not have considered is the humble art package. Rummage through your collection and you should find that quite a number of programs support text and in some cases, colour output. Prism Paint 2 — with its Speedo support — is useful, but even good old Degas can turn out colour pictures and boasts acceptable text handling. The resolution might be low, but given some colour and a suitably sizable font or logo you might just get away with it.

Some structured drawing packages also sport text facilities. Kandinsky boasts its own BGI vector fonts, which can be saved as a GEM file and imported into most desktop publishers, although the "wireframe" look is a little difficult to integrate into designs.

GhostScript is also worth a try if you have an application with a PostScript printer driver — Timeworks 2, for instance. Although your design will look jagged on screen and the spacing may be a little strange, you only need run the "PS" file through GhostScript and a perfectly smooth document should pop out of your printer. The package itself is freeware, but does require a reasonable amount of memory to work effectively — enough, in fact, to make Calamus 1.09n look like a rather attractive proposition.



Even Degas boasts reasonable font facilities (it's fairly easy to touch up the jaggies) and colour output.

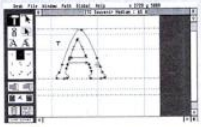


GhostScript can turn Timeworks' PS files into smooth, sophisticated documents given enough memory and disk space.

Font of knowledge

Finding the right font for the occasion can be difficult, and some people go as far as designing their own. The software you choose obviously depends on whether you are dealing with vector or bitmapped fonts. The best package as far as bitmaps are concerned is Fontkit Plus 4 — it's quite happy to edit Signum, GDOS or That's Write files and offers just about everything the aspiring font designed could ask for.

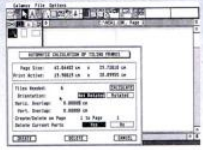
Numerous vector font editing packages have appeared over the years, ranging from the standard Calamus font editor to Didot, but most have been quite expensive. The exception is Fonty — a neatly proportioned program that converts PostScript fonts to Calamus format and allows you to edit the results. It provides a reasonable amount of power at a very affordable price and if you've got the patience to edit or even create your own fonts, it's worth its weight in bacon flavour Wheat Crunchies.



Economical Calamus font editing is a reality thanks to Fonty...

Versa-tile

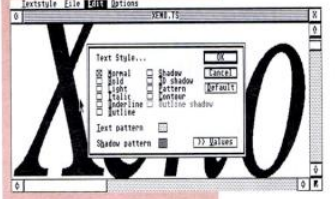
Thus far, we've been referring to "large text" in terms of a standard A4 sheet of paper, but with the help of the right software your ST can manage much more than that! In fact, Calamus SL is able to spread your design over a number of sheets of paper — in true Blue Peter tradition, you can use some sticky back plastic to put all of the bits together. The technique is called tiling and it's extremely easy to use — you can either define by hand what you'd like to appear on each page or get the software to do all of the dirty work for you, compensating for the margins on the page as it does so.



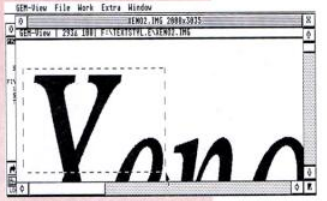
Calamus SL can tile large designs onto standard A4 pages, automatically if desired.

Text with style!

It can be difficult to understand exactly what Textstyle is until you see it in action. Let's look at its role in the production of a page...

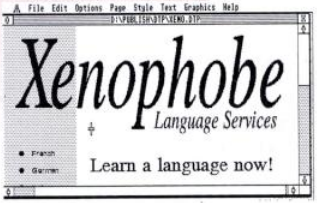


1) The first job is to create a logo with Textstyle. In this case, we've opted to split "Xenophobe Language Services" into two parts — it allows a little more flexibility at the design stage. Don't forget to adjust the resolution of the image according to the amount of memory in your machine and the



quality of your printer.

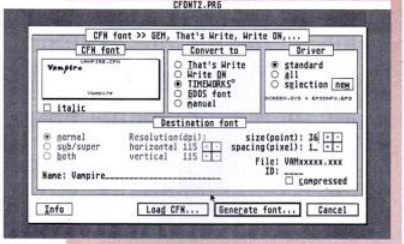
2) Large images consume a lot of memory, and therefore it's wise to trim out any border. Textstyle does allow you to change the size of its canvas, but it's easier to use a large page and to trim the results with GEM-View or similar — Timeworks is certainly happier with GEM-View's IMG files.



3) Finally, the two-part logo is imported into the document and scaled to the appropriate size. The frame tint has been set to "transparent" to allow the background to show through the white portions of the heading. The rest of the document uses the standard font sizes.

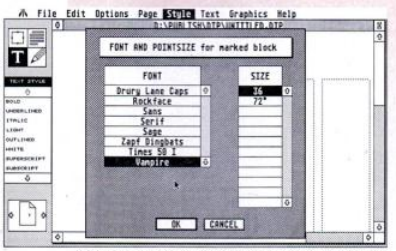
Fontastic!

C-Font eases the burden of creating and installing bitmapped fonts. Here's a quick run through the procedure for GDOS - Timeworks is the guinea pig...



1) First, choose a Calamus CFN file - you'll find plenty in the public domain — and load it into C-Font. Raise the point size to 36-points, click the Timeworks button and then "generate" the font.

2) As you save the newly-created font, the program will automatically update your ASSIGN.SYS file. Remember, large fonts can knock a big hole in a floppy disk and a megabyte of memory. You may need to strip out some existing fonts to make room for the new addition.

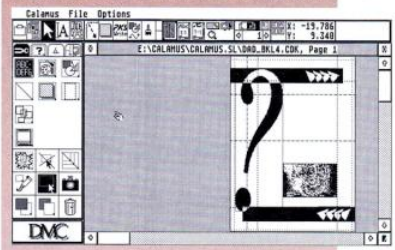


3) Reboot and run the font widths program. Once installed, you can use your desktop publisher as normal.
You will find that Timeworks automatically offers the point size you've installed and another, twice its size (all scaled sizes are marked with a dot in the font dialogue box).

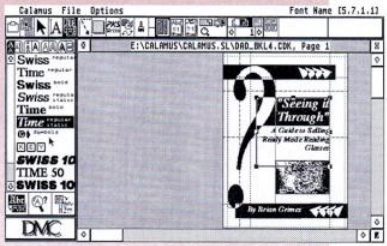
A scale model...

Would you like an idea of the flexibility afforded by scalable font system? Read on...

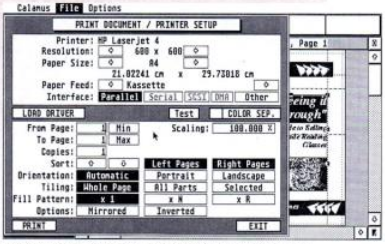
1) First, the basics of the design are laid into place. Theoretically, the



question mark could be created within Calamus, but O-Line is used in this case because it allows the character to be stretched with ease.



2) Now the pamphlet title is added. Thanks to the vector font system, it can be adjusted minutely to fit in properly with the rest of the design - 62-point Times is about right here.



3) When your design is finally printed it will remain true to the image on the screen and impeccably smooth because it will be tailored to the resolution of your printer. For professional work, there is no substitute.

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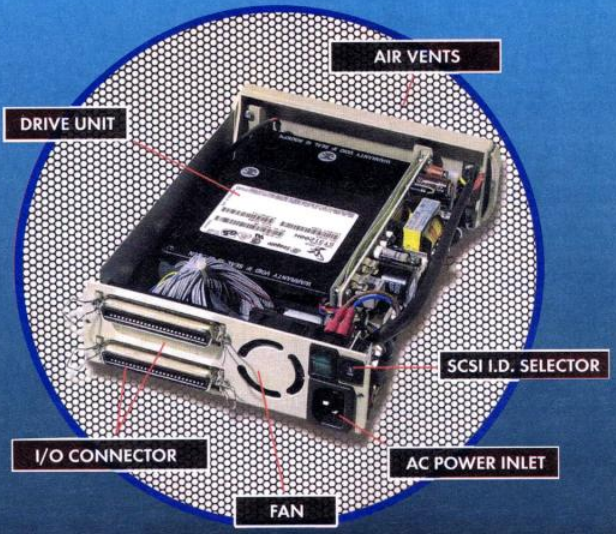

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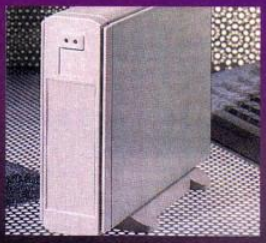

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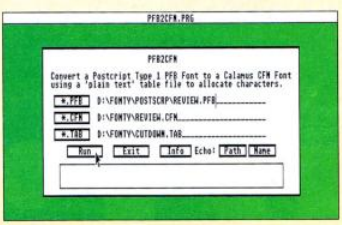
Big fonts

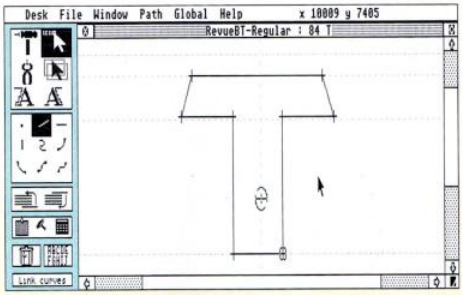
Andrew Wright shows you how to get hulking great headlines in Timeworks 2.

Once you've worked with Timeworks 2 for a while, you'll start to realise one area in which it is lacking, particularly if you want to create big, eye-catching posters or flyers. It has no nice, big, bold fonts that scream "Oi you, read this!". Or "Excuse me, sir, I think this will interest you" depending on which side of town you were brought up.

The good news is that adding your own fonts is easy - all you have to do is find some suitable ones and off you go. There aren't too many large bitmapped fonts around these days so the best thing to do is make your own. With the aid of utilities like Fonty and Fontkit Plus, both of which are available from the FaST Club for a very reasonable price, you can convert fonts in vector format for use in GDOS programs like Timeworks. This includes a whole raft of fonts in PostScript and Calamus formats which you can find on BBSs and PD libraries.



PBN2CFN is a great little freebie thrown in when you buy Fonty. It converts the PFB file of a PostScript font (the bit with the outlines in) into a nice, neat Calamus CFN font file. Why convert the outlines from one format to another? The answer is that the CFN format is still the de facto standard on the Atari and more programs can use it than can handle PostScript fonts. In particular this includes Fontkit Plus and its stablemate C-Font which is aimed at That's Write users. In this example I'm about to convert a Revue font to Calamus format.

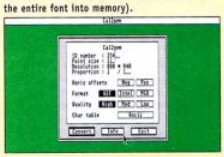


Fonty is a low cost utility for editing and generally playing about with Calamus fonts. You can even design your own if you've a mind too although it's a lot harder than it looks. I know because I've tried... Calamus fonts can be imported directly into Fontkit Plus and then scaled and saved a GDOS or GEM fonts (the terms are interchangeable). The fun comes when you've only got a 1Mb machine or you when you want to start creating huge point sizes that even 2 and 4Mb STs will struggle to load.

One way round the problem is to run the CAL2GEM utility (part of Fontkit) as a standalone program which means you can convert Calamus outlines to high resolution printer fonts of 60 or 70 points or even higher. As a rough guide 72 points means the capitals will be an inch high so you might want to try creating fonts of roughly this size or more, bearing in mind that Timeworks will make them available at twice that point size too.

The trouble comes when you want to load them into Fontkit afterwards, perhaps to edit or tidy them up, or even to add special effects. Fortunately you can use Fontkit to create character tables that include only the relevant characters such as the upper and lower case letters. After all, you rarely need punctuation or other symbols in posters... These character tables are text files that you can edit using a text editor to remove all but the essential characters and symbols.

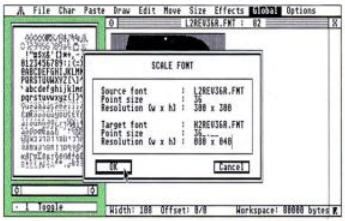
This CFN font is being converted to a 300 dot per inch printer font (for a Deskjet setup) in GST format (best for Timeworks) and with offsets turned off. The point size is 44 points (on a 1Mb machine this is about as big as you can go without causing Timeworks to grind to a halt or even crash because at print time it has to load the entire font into memory).



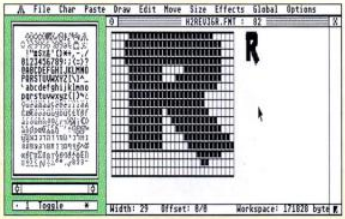
The next stage is to create a screen font at the same point size (with the same ID number). However if you create a 44 point screen font, this will only be used by Timeworks when you view the page at normal (1:1) size. What happens if you want to view page at other zoom levels? The answer is to create (and later install) screen fonts that roughly match the zoom levels Timeworks uses. In this case 11, 22, 30 and 44 point screen fonts cover every eventuality allowing you to view your new font at all Timeworks zoom levels. Note that it isn't necessary to have 11, 22 and 30 point printer fonts unless you actually want to print at these sizes.

Here I'm creating an 11 point screen font for medium resolution (80 by 40 pixels). Timeworks

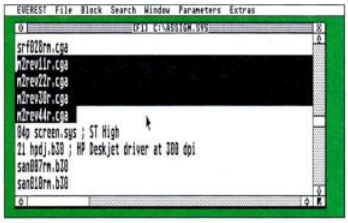
differs from other GDOS programs in that it uses 80 by 80 dpi screen fonts in high resolution and 80 by 40 dpi screen fonts for medium resolution.



Another way to create screen fonts is to use Fontkit Plus to create them directly (if you have enough memory to load the font). Here I'm creating a 36 point screen font from an existing 36 point printer font.



And here's the result. It looks a little jagged but the thing to remember is that it's only a screen font - you're only going to use it to lay out the page and get a rough idea of the way it will look before it's printed. When you hit the print button, Timeworks will load the 300 dpi version and use that for output.
The next stage is to copy the newly created set



of fonts to your fonts folder (usually PUBLISH/GEMSYS on your boot drive) and then persuade GDOS to register them. To do this you must edit the ASSIGN.SYS file, a process that has probably been responsible for more mixups than anything else in the history of the Atari.

Timeworks creates its own ASSIGN.SYS file which has several features you should look out for. Table 1 shows a cut-down ASSIGN.SYS file as an example.

To add fonts to the setup, you simply need to add the names of the fonts under the relevant entry, be it a screen or printer font. The order used to be crucial but no longer matters with Timeworks version 2. However Jeremy Hughes, the author of Fontkit, advises that you ensure that fonts are added in order of ascending ID number. The ID number should also be under 255 to be on the safe side. Pay strict attention to the file extension too as in Table 2.
Here's a poster with the Revue fonts installed.

The top line is 44 point, the word "SALE" is in 88 point, and the next two in 30 and 22 point sizes respectively.
Here's the same document at a lower zoom.

Timeworks has now substituted the 30 point text for 20 point, the 88 point for 44 and both the 30 and 22 point lines for 11 point. It isn't WYSIWYG - what you see is what you get - but the more screen fonts you install the more accurately Timeworks

Table 1: ASSIGN.SYS

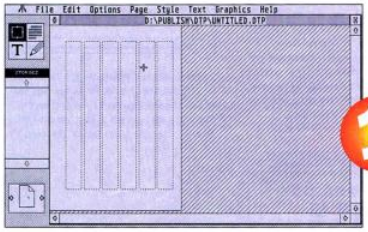
Comment	ASSIGN.SYS entry
This line tells GDOS where your fonts are:	path = A:\gemsys
No default fonts are installed.	01p screen.sys ; Default
No low resolution fonts are installed.	02p screen.sys ; ST Low Resolution
Medium resolution screen fonts are listed	03p screen.sys ; ST Medium resolution
under this entry:	san003rm.cga
	san007rm.cga
	san010rm.cga
	san014rm.cga
	san020rm.cga
This line points to the GDOS printer driver:	21 hpdj.hph ; HP Deskjet driver at 300 dpi
The lines underneath are printer fonts.	san007rm.hph
	san010rm.hph
	san012rm.hph
	san014rm.hph
	san020rm.hph

Table 2: Extenders

Output device	File extender
Medium resolution screen	*.CGA
High resolution screen	*.VGA
9 pin dot matrix printer (120 by 144 dpi)	*.EPS
24 pin dot matrix printer (180 by 180 dpi)	*.ELQ
24 pin dot matrix or bubblejet printer (360 by 360)	*.B36
Laser or Deskjet	*.B30

Wanna turn your ST into a monster, poster-making machine? Join Nial Grimes in kicking a little creativity out of Timeworks...

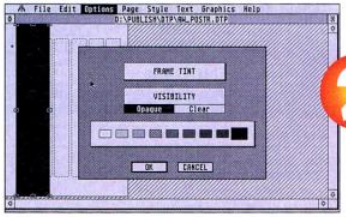
Walk tall



1

1) The temptation to immediately pick up the mouse the moment you sit down to design your poster is immense, but it really pays to think about what you want to achieve before you start. In this case, we're designing a poster for a jumble sale, so let's consider the importance of each piece of information that needs to go on the page.

Obviously, the words "jumble sale" must dominate the proceedings, and the location and date of the event are also fairly important. It would be nice to mention the sort of things that will be on sale too and lower down on the priority list are the name and address of the organiser and so on. You might find it useful at this point to sketch a basic idea for the design, relating importance to size on the page – things usually work out that way in desktop publishing.



2

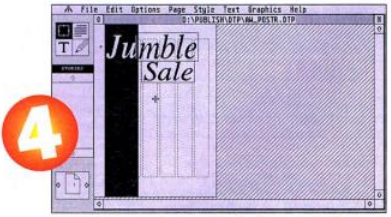
2) Having conjured up a basic outline for the design on your notepad, grab the mouse and let's get down to business. We're going to start this design by positioning a large, black tinted box at the left of the page. To do that, draw a regular frame and then use "frame tint" from the "options" menu to adjust the shade.

Tinted boxes are a remarkably good method of breaking up a page and can be used in a number of ways – for instance, you can use an offset grey box to create a shadow effect. Beware of going too mad on the shadows though; it's a trick that's well-known to millions of Timeworks users around the globe and you don't want to end up with bland documents. That's the foundation laid – let's move on to something a little more exciting...

3

3) We want the headline to grab as much attention as possible and therefore it needs to be big and bold. Textstyle is the ideal choice for this extra-special occasion, so save your work and load up the application. Choose a Calamus font (Times Italic will do nicely) and adjust the size to 72 points.

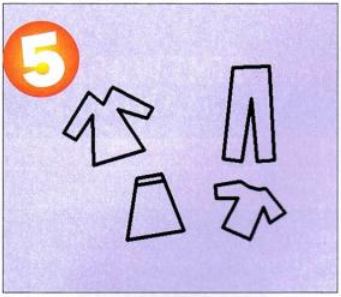
Three pieces of text now need to be created: a "Ju", an "mble" and a "Sale". The "Ju" is going to be overlaid on the tinted frame and therefore needs to be inverted – GEM-View will do the trick nicely (you'll find the option in the window-based "GEM-View" menu or you can simply press Alternate-V). You can also use this opportunity to re-save the images in an IMG format that Timeworks can understand. If you haven't got Textstyle, just move on to the next step.



4

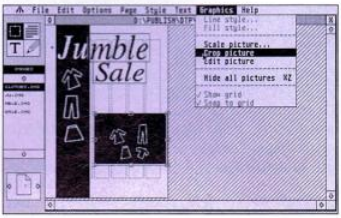
4) The three-part headline now needs to be dragged into memory with the help of the "import picture" menu option. Now, draw three frames and pop one part of the headline in each, by clicking on the filenames in the browser. As the headline is a picture, it can be easily stretched to fit the available space – simply play around until you find a size that looks good.

If you don't have Textstyle you can create a similar effect with the help of Timeworks' "white" style on a 72-point font. Simply use the text cursor to highlight the "J" and the "u" and choose "white" from the "style" menu. In order for the white text to display properly over the black background, you will also need to make the frame transparent by using our old friend the "frame tint" dialogue box.



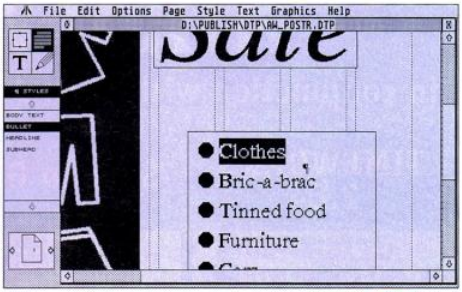
5) The tinted frame at the left of the page is looking a bit empty, so let's brighten it up a bit with a picture or two. In many cases you can get hold of some ready-drawn clip art to plug a hole, but in this instance we're going to draw our own – some cartoony clothes should be ideal.

The above image was created with a little assistance from Degas' K-line tool and a medium sized brush, but any art package worth its salt will allow you to create a similar effect. The images are eventually going to appear as white on a black background and therefore the whole picture needs to be inverted – again, most art packages will cope admirably, but if you have any problems, GEM-View can be used. You might also want to take this opportunity to trim out any unwanted borders, because empty image space means wasted memory when it comes to Timeworks.



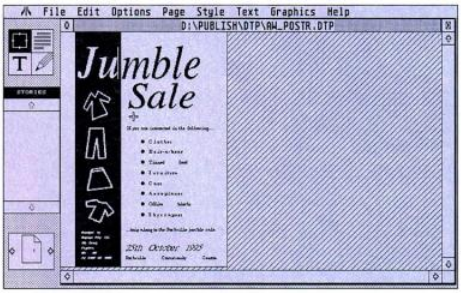
6) The next job is to get the the newly-drawn images onto the page, by using the "import picture" menu option. You only need to have one copy of the "clothes" picture in memory – simply create four frames, and flow a copy of the image into each one, by selecting the frame and clicking on the filename in the browser.

The cropping tool can be used to isolate each piece of clothing – using the scissors icon, simply drag a box around the portion you want to keep. Now, it's just a case of disabling "snap to guides" and sliding each frame into position. Unfortunately, Timeworks has a habit of printing white "grins" around pictures positioned on a black background, so it might be necessary to use a few tinted frames to paste over the defects. With careful use of the "copy" and "paste" options it needn't be too much of a chore.



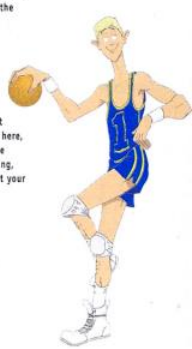
7) The centre of the document now merits some attention – we need to use some bullets (round, black characters) to highlight the type of things that are going to be available at the jumble sale. Timeworks provides us with a default "bullet" paragraph style, which helps considerably. To adjust this style, select the paragraph icon, click on "bullet" and choose "paragraph style" from the "text" menu.

In the above example, we've used the Serif font at 28-points; it's big enough to be readable from a distance and yet doesn't detract from the headline. To physically style the "products" just click on each and choose the modified "bullet" style from the browser. The other pieces of text can be typed into their respective frames, highlighted and tweaked via the "style" menu – you can create a separate paragraph style for the phone number and introductory text if you really want to.



8) And here it is, the finished design. Bear in mind that the display isn't totally accurate at this magnification; the fonts at the foot of the page are actually quite well proportioned, and will naturally print at the correct size. We've added the organiser's name and address at the foot of the page (using a white text style) and generally tidied up a little bit.

The only job that remains is to proof the poster, or print it out and adjust any problems that are revealed; you can guarantee that there will be some. Although we've focussed on one particular design here, the principles involved apply to any poster – think carefully about the priorities and try to make the thing interesting! Steer away from boring, large, centred text and use your imagination – it's the only way to get your message across successfully!



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TIMEWORKS 2.04	Speedo GDOS	TIMEWORKS 2 MANUALS
SCALEABLE FONTS WITHIN TIMEWORKS	THE FONT SOLUTION	AN AID TO MASTERING TIMEWORKS

The Atari World issue 4 reader disks brought you the sensational Timeworks 2.. A great program except for one thing - its limited built in fonts. The solution? SPEEDO GDOS and Timeworks 2.04 exclusive to Atari World! Speedo GDOS was produced by Atari as the solution to the lack of fonts on the ST, TT and FALCON 030. Timeworks 2.04 is a previously unreleased version of Timeworks Publisher that supports SPEEDO GDOS and lets you specify font sizes from within the Timeworks program itself.

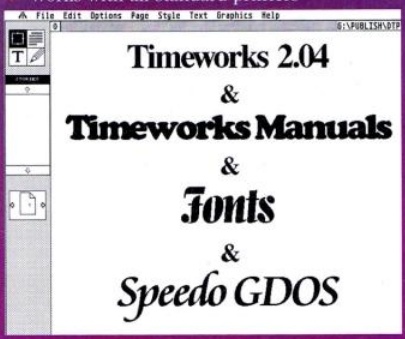
- The first Falcon compatible Timeworks Publisher.
- Timeworks 2.04 is an upgrade to the Atari World Readers Disk 4 release. You need to have both disk sets to install Timeworks 2.04.
- Requires a minimum of 2MB of memory and a hard disk (4MB of memory recommended)
- Easy to install....
- Requires either SPEEDO GDOS 4.0, 4.2, 5.0 or NVDI 3.
- Works with all standard printers

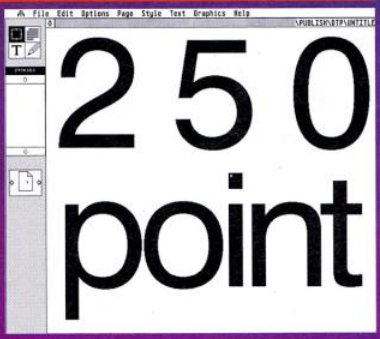
Timeworks 2 manual

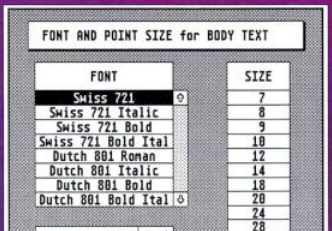
Get Speedo GDOS and Timeworks 2.04 for just £49.99. Save £50 when you also buy two font packs.

GST, the produces of Timeworks Publisher 2, were always renowned for the quality of their manuals. The Timeworks 2 manual is a model of clarity and will help any user get the best from this great program. We have the original manual available for just £14.99.

The full manual for just £14.99







Publisher 2 using Speedo GDOS Timeworks Publisher 2.04 and Speedo GDOS 4 in action!

Extra Speedo Fonts

You need to use either SPEEDO GDOS 4, SPEEDO GDOS 5 or NVDI 3 in conjunction with Timeworks 2.04. You can choose which to buy if you don't already have a copy. However, any serious DTP user will soon want more variety. That report, menu, invitation, newsletter or advert can be easily livened up by a change of font.

COMPO have two font packs with more than enough fonts to suit all but the most demanding Atari owner. Font Pack Office is designed for the designer producing documents typical to the office environment. It contains fonts ideal for reports, thesis, direct mail etc.

Font Pack Gold is more for the 'designer DTP' type applications such as adverts and greeting cards. Both packs contain around 100 fonts each. The Office pack gives you a wider range of variants on the same font whereas the Gold pack contains more variety of font styles.

The fonts in the Office pack...

Futura (17)
Humanist Slabs 712 (4)
Blackletter (1)
Americana (4)
Bernhard Modern (4)
Caslon 540 (2)
Blippo (1)
Bernhard Bold Condensed (1)
Bernhard Tango (1)
BALLOON (3)
Bruce Old Style (2)
COPPERPLATE GOTHIC (5)
Bookman (2)
Caslon Openface (1)
Caslon Bold (2)
Futura Black (1)
Compacta (1)
Humanist 970 (2)
Humanist 521 (11)
Aldine 721 (7)
Humanist 531 (3)
Bernhard Fashion (1)
Humanist 777 (7)
Caslon Old Face (3)
Aldine 401 (4)
Bitstream Amerigo (5)

PLEASE NOTE
The number in brackets ( ) gives the number of different styles of each particular font.

The fonts in the Gold pack...

Amazone (1)
Impuls (1)
Bitstream Cooper (10)
American Text (1)
Brush 445 (1)
Egyptian 505 (3)
Zapf Calligraphic 801 (4)
Egyptian 710 (1)
English 157 (1)
Impress (1)
Poster Bodoni (2)
Lanfman (2)
Commercial Script (1)
Zapf Elliptical 711 (4)
UMBRA (1)
Cloister Open Face (1)
Goudy Heavyface (2)
Exotic 350 (3)
Zapf Humanist 601 (8)
MAXIMUS (1)
Goudy Handtooled (1)
Goudy Catalogue (1)
Hobo (1)
Wedding Text (1)
Freeform 721 (4)
Freeform 710 (1)
STENCIL (1)
University Roman (2)
INFORMAL 011 (2)
SHOTGUN (2)
Candida (3)
Cloister Black (1)
BANK (2)
Vineta (1)
Broadway (1)
Goudy Old Style (1)
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Timeworks 2.04	New	14.99		
Timeworks 2.04, Font Pack Office	68.98	54.99		
Timeworks 2.04, Font Pack Gold	68.98	54.99		
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Speedo GDOS 4 and Timeworks 2.04	New	49.99		
Speedo GDOS 4, Timeworks 2.04 and Font Pack Office	99.98	79.99		
Speedo GDOS 4, Timeworks 2.04 and Font Pack Gold	99.98	79.99		
Speedo GDOS 4, Timeworks 2.04, Font Pack Office and Gold	149.97	99.99		
Speedo GDOS 5 and Timeworks 2.04	New	59.99		
Speedo GDOS 5, Timeworks 2.04 and Font Pack Office	109.98	89.99		
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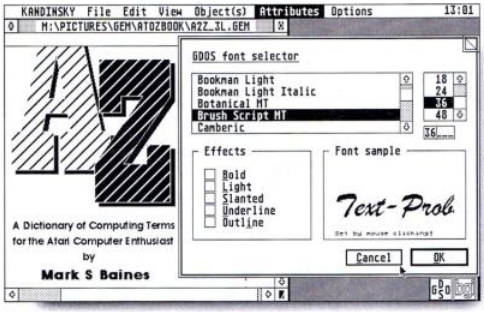
The Language Barrier

Atari World presents more exclusive excerpts from Mark Baines' definitive A to Z guide to the Atari.



Scalable fonts. More programs are capable of handling scalable fonts, such as Kandinsky. Here, TrueType and Speedo fonts can be selected at any size without loss of detail.

This month we present the fifth of six edited excerpts from Mark Baines' Atari A to Z, the essential guide to everything to do with Ataris. Note the words edited excerpts - the full text runs to 128,000 words and it is aimed as much at the beginner as it is the experienced Atari user. It really is a case of everything you wanted to know about your Atari but were afraid to ask!

If you want the complete guide, you can order Mark's book direct from Linnhe Computing, Shore Street, Inver by Tain, Ross-shire IV20 1SF or telephone (01862) 871624. You can also email Mark at *msbaines@cix.compulink.co.uk*. Remember, if it isn't in the Atari A to Z, it probably doesn't exist!

SC1224

Low resolution Atari 12 inch colour monitor with built-in speaker and external controls.

SC1435

Atari 14 inch colour monitor effectively replacing the SC1224. It has a swivel base.

Scalable outline font

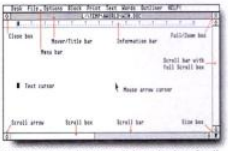
A font that is constructed from a set of mathematical rules describing each character's shape rather than using a bitmap. Their advantage is that any character can be scaled to any size without loss of detail or crude blockiness that is the result of scaling bitmapped fonts.

SCC ports

These are two high-speed serial ports on the Mega STe, TT and Falcon using the Zilog 85C30 SCC chip. Port A can be used as the Local Area Network port or as a RS-232C port and port B is a RS-232C serial port for modems.

Scroll arrow

Arrow icons on the right and bottom GEM window edges which move the display by a small amount in the direction of the arrow.



Scroll arrow, scroll bar, scroll box, size box. Scroll bars can be found on the bottom and right edges of a window. They are connected by the Size box icon.

Scroll bar

The right and bottom GEM window edges containing two scroll arrows, a scroll box and up to two shaded areas each. They are joined together in the bottom right-hand corner by the size box.

Scroll box

The moveable scroll box within a scroll bar indicates the current position and size of the window's contents relative to the whole file. The window contents can be scrolled by clicking in the shaded area or by dragging the scroll box.

SCSI

Small Computer Systems Interface. A common interface standard for linking up to seven other devices to microcomputers, such as disk drives (floppy, hard disk, CD-ROM, removable SyQuest cartridges), tape devices, scanners, typesetting machines etc.

Serial interface

An interface through which data can only pass one bit at a time, such as the RS-232 port.

SF314

Atari external double-sided 3.5 inch floppy disk drive.

SF354

Atari external single-sided 3.5 inch floppy disk drive.

SH204

First Atari external 20Mb 5.25 inch hard disk drive in a brick-like case.

SH205

Atari external 20Mb 3.5 inch hard disk drive in a Mega ST type case.

Shifter

An Atari custom chip converting the data in video memory into a signal which can be used by a monitor or TV.

Size box

Bottom right corner GEM window icon to change the size of the window.

SLM605

Atari laser printer superseding the SLM804.

SLM804

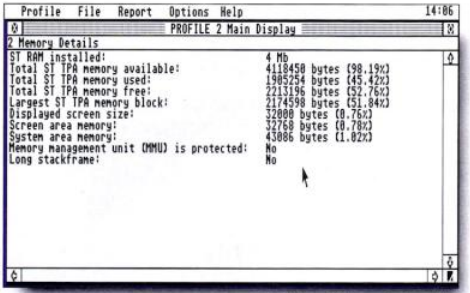
The first Atari laser printer.

SM124

The first Atari 12 inch non-glare, monochrome monitor for the ST with a sharp and stable image and internal mono speaker.

SM125

The Atari 12 inch monochrome monitor



ST RAM. Many utilities can show how much ST RAM you have left to run programs in.

with swivel base, external picture controls and a mono speaker. It replaced the SM124 for a time, but some production difficulties caused Atari to revert to the older design.

SM194

Atari 19 inch monochrome monitor for the TT with up to 1,280 by 960 resolution. Now known as the TTM194.

SM195

Atari 19 inch monochrome monitor for the TT with up to 1,280 by 960 resolution. Now known as the TTM195.

SMM804

An early Atari 9-pin dot matrix printer.

Sound chip

A chip capable of generating synthesised or sampled sounds.

Sparrow

An Atari computer project that had similar specifications to the Falcon. Development of the Sparrow was so quick that the specifications of the original Falcon quickly became out-of-date making it redundant. The Sparrow replaced the Falcon and was itself renamed the Falcon in early 1992.

SpeedoGDOS

A new version of GDOS using the Bitstream Speedo font technology which replaced FSMGDOS. Development was passed to Compo in 1994 and with the release of version 5 SpeedoGDOS now supports TrueType and PostScript Type 1 scalable fonts in addition to Bitstream Speedo fonts.

ST

Sixteen-Thirtytwo. The ST's name is derived from the architecture of the MC68000 processor which has 16-bit external and 32-bit internal addressing (the size of addresses it can access in memory and within itself). The ST featured an 8MHz 68000 with 512K of RAM although some very early models only had 256K RAM (the 260ST). TOS was originally loaded from disk but soon incorporated into a ROM and a mouse and GEM interface was standard. The single-sided 360K floppy disk drive was a separate unit which was incorporated into the body of the machine with the introduction of the STF.

Stacy

Atari ST laptop, initially battery powered but later mains only and about the size of a small briefcase. It has an internal hard disk and a floppy drive and a backlit LCD screen which is ST high resolution compatible. A small integral trackball is used instead of a mouse to move and control the cursor and the function keys, cursor keys and numeric keypad are all half-sized to fit within the smaller space.

ST Book

Atari A4-size notebook computer based on an 8 MHz MC68000 ST running TOS 2.06, with a BLiTTER, a built-in 640 x 400 mono LCD screen, hard disk but no floppy drive. It can be run on seven AA batteries with an optional rechargeable NiCad battery pack.

STe

Enhanced ST. A development of the ST with 8-bit stereo sound and an enhanced colour palette of 4,096 colours compared to the ST's 512 (although only sixteen colours can appear on screen at once). The TOS supplied was 1.6 and 1.62.

STF

Early model Atari ST with built-in single-sided (later double-sided) floppy disk drive and power supply unit.

STFM

Early model Atari ST with built-in floppy disk drive (initially single-sided) and modulator for connection to TV sets for colour resolutions only.

STM

Early model Atari ST with built-in modulator for connection to TV sets but separate floppy disk drive and power supply unit.

ST Pad

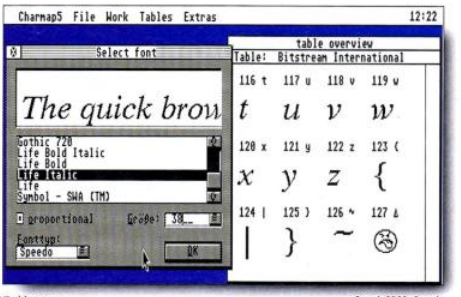
The early name for the Atari Stylus computer.

ST RAM

This is the normal memory on Atari computers used to run programs in and store the video image. In addition, the TT also had Fast TT RAM.

Stylus

Atari A4-sized hand-held computer using a stylus (pen) as the main input device rather than a keyboard and mouse and containing handwriting recognition software. It was STe compatible, running TOS with a 640 by 400 monochrome LCD touch-sensitive screen. Problems with the handwriting recognition software and lack of funds caused development to be stopped in 1992.



SpeedoGDOS. Speedo fonts have a large character set with some unusual characters in it!

Supervisor mode

An operating mode of the processor chip intended to prevent a user program accessing important systems data in an uncontrolled manner.

System font

The normal font used for screen display available in three sizes, a 16 by 8 pixel character font, an 8 by 8 font and a 6 by 6 font used on the desktop for icon labels.

System variables

Places in a protected area of memory storing important system data mainly for TOS.

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GASTEINER SYSTEMS

Hard and fast

Ofir Gal feels the need for speed - every bit counts in the world of comms.

Get connected

When I first got into computing, my interest was limited to MIDI music. I kept seeing modems mentioned in magazines, but I just couldn't see what the fuss was all about. Things are very different these days. I am very much dependant on my modem which, among many other things, is used for transferring this very article to the editor. Sending files back and forth aside, I am also an active user of CIX, a UK based super-BBS, where thousands of users meet in a kind of virtual "pub" for the latest Atari gossip.

The Atari conference on CIX is a great source of information where I pick up the latest software and user tips. It provides a way for Atari users to share their knowledge. There are also many free BBSs with similar facilities. Got a problem printing with your brand new printer? No problem. Just put a message in the Atari area and a little while later someone will come to your aid. Do you need a program to convert image files? Just log on to an Atari BBS and download the latest version of GEM-View. Electronic mail is becoming commonplace and is a very effective means of communicating with people, wherever they are.

Modems have come a long way in the last few years. They are faster and cheaper than ever with 14,400 bps modems now selling for around £100. They almost always feature fax capabilities which are normally superior to standard fax machines too. Just check out the latest models featured in these pages. If you thought that computer communications was an expensive business then you are in for a pleasant surprise. It is possible to ride the information super-highway for around £10 a month – including the phone charges.

Ofir Gal, Technical editor

The name modem is in fact an abbreviation of Modulator/Demodulator. The modem works by converting digital information into a modulating wave that can be transmitted over the phone line. It does the reverse when receiving data and effectively allows the exchange of text and files between two computers as if they were in the same room.

To connect a modem to your Atari computer all you need is the correct cable and a communications program. There are several such programs available - turn to page 62 for more information. Many modems are also fax capable, but special software is required in order to make use of this feature. Check our faxing feature in page 64 for the complete picture.

Modems are, like most computer hardware, getting cheaper by the day. The major manufacturers have recently announced a substantial price drop with the latest 28,800 bits per second (bps) modems now retailing at around £200 and their 14,400 bps counterparts going for about £100.

Maximum speed

In order to achieve maximum throughput, the rate at which the computer communicates with the modem should be set at twice the modem speed or higher. This way, the computer can pump the data into the modem which in turn compresses the data and sends it along the phone line at a lower speed, effectively doubling the data rate. Unfortunately this is where the whole Atari range fails by either not providing an obvious way of setting speeds higher than 19,200 baud, or by simply not having the hardware to do any better.

The ST, MegaST and STe are only capable of 19,200 baud, but a simple modification can make them work at 38,400 baud or more. The MegaSTe and TT feature additional and improved modem ports capable of speeds up to 153,600 baud. The Falcon has a single modem port which is also capable of transferring data at 153,600 baud. The table below shows the various ports and their maximum speeds. In general, use Modem 2 if you can for modem connection, except on a TT where Serial 2 is the better choice.

The way TOS handles the serial and modem ports is appalling, but there is hope in the shape of the freeware program HS-Modem. Currently at version 6, it's a simple utility that goes in the AUTO folder and provides alternative, optimised routines that give excellent transfer rates. It also corrects the various flow control bugs, negating the need for any of the various serial patch programs. Although HS-Modem provides fault free modem operation, it's rather complex to set up. This issue of Atari Pro contains a guide to installing HS-Modem on all Atari computers.

Port	ST/STe/MegaST	MegaSTe	TT	Falcon
Modem 1	19,200	19,200	19,200	N/A
Modem 2	N/A	153,600	153,600	153,600
Serial 1	N/A	N/A	115,200	N/A
Serial 2	N/A	115,200	115,200	115,200*

*Note: The Serial 2 port on the Falcon is only available as a LAN port with a potential use in networking.

Standards

If there was an award for the most confusing standards, I'm sure modems would be high on the list of nominees. There are just too many of them. The following list contains the most common ones.

V.34 – Connection at 28,800 bps with fallback to 26,400, 24,000, 21,600, 19,200 and 16,800 bps. This standard supersedes V.FC. All V.34 modems can also work at lower speeds and most of them are also V.FC compatible.

V.FC – Also known as V.FastClass, it is similar to V.34 with a top speed of 28,800 bps. This protocol was common before V.34 emerged as the final standard for 28,800 bps communication. It is not a good idea to buy a V.FC modem, unless it is also V.34 capable.

V.32bis – Probably the most common speed of 14,400 bps.

V.32 – 9,600 bps.

V.22bis – 2,400 bps.

V.17 – Fax send and receive at 14,400 bps.

V.29 – Fax send and receive at 9,600 bps. Most hardware fax machines work at this speed although the very latest models can also send and receive at 14,400 bps.

V.42, MNP2, MNP3, MNP4, LAPM – These are various error correction protocols.

V.42bis, MNP5 – On-the-fly data compression protocols.

Jargon buster

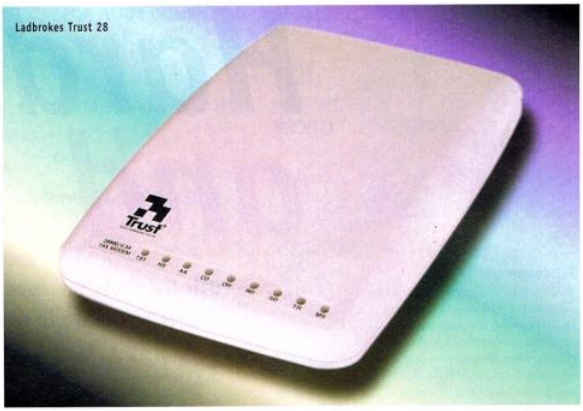
bps - Transmission rates are measured in bits per second. The fastest modems can send or receive data at 28,800 bps which translates to a little more than 3K of data per second (a 100K file in about 30 seconds).

Flow control – a method used to regulate the transmission of data between the computer and modem. Hardware flow control (CTS/RTS) has now almost completely replaced the use of software flow control (XON/XOFF). Hardware flow control is required for high speed transfers.

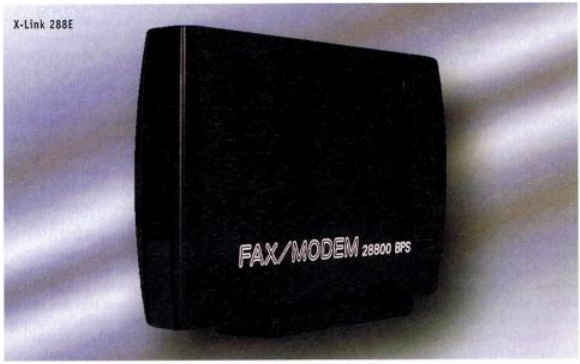
Error correction – since phone line quality can vary, various methods of error detection and correction are employed in modems, to guarantee data integrity.

BBS – a bulletin board service is a computer running a special program, allowing users of remote computers to log on to it using a modem. A typical BBS will have a chat area, email facilities and a file area where you will find the latest shareware programs.

Ladbrokes Trust 28



X-Link 288E



Modems

You can connect any external modem to an ST or Falcon, but you may find it easier to buy one from an Atari dealer. Both Ladbroke and System Solutions have 28,800 modems on offer. The two modems are virtually identical, based on a Rockwell chip set. Both modems are BABT approved and support V.34 and V.FC with automatic fallback as well as Class 1 and 2 faxing at 14,400 and 9,600 baud. These are UK specific models with all the latest features such as 115,200 DTE speed, non-volatile RAM and adjustable speaker volume. There is an array of LEDs to indicate, from left to right, power, DTR, send, receive, off hook, remote modem detected, auto answer, connection and error detection.

The System Solutions (0181 693 3355) model is an X-Link 288E which can stand upright or lay horizontally. It is shipped with the required power supply and leads as well as a shareware version of Connect and costs £219.

The Trust 28 modem from Ladbroke (01772 203166) does not stand upright, but in addition to the various leads and Connect, a disk with the shareware fax program Junior Office is included. It costs £179.99. The manuals for both contain a comprehensive list of the AT command set and registers.

Diamond Edge 2 Ships!

Finally, the wait is over. The biggest upgrade to the best disk utility program ever is complete and is shipping *now*! Over two years of programming have gone into this Diamond Edge upgrade that *no* Atari owner should be without.

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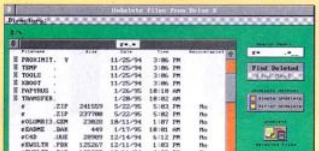


Diamond Edge 2; un-deleting files is a piece of cake

There are two types of computer users; those who have lost data and those that *will* lose data. Diamond Edge 2 creates a third ruling class: those that are protected from data loss! Your data is too valuable to be without the protection of Diamond Edge 2.

Diamond Advanced Disk Editor

DADE - the powerful disk editor included in Diamond Edge 2

There are other disk editors, but none as powerful, flexible, and easy to use as DADE. Specifically designed with time-saving and impressive features to aid any editing or recovery effort, there is *no* other disk management system that offers as much, including Physical Device Level Disk Editing. The ultimate in data recovery and low level power tools.

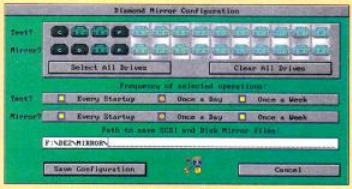
- Edit physical disk sectors, logical disk sectors, or files. Supports all Atari disk formats and sector sizes.
- Cut/paste buffer.
- Drive Info window. Includes locations of key disk structures.
- Easy navigation around the disk with a pop-up GoTo function. Special function to search for lost directories.
- Easy to use edit window with Offsets, Hex, and ASCII displays.
- Convenient function button bar. Many with special time saving features when double-clicked.
- Easy-to-use Directory Edit window decodes the information for you with a trace feature for FAT entries for a file. Very nice!
- Flexible Fill function.
- Powerful search and replace function.
- Rebuild lost files sector by sector.

Diamond Edge, the most popular and powerful hard disk management tool package for the Atari has undergone its first major overhaul in 2 years. New features include a streamlined, re-designed user interface, many new and enhanced functions, internal speed optimisations, plus new programs like Diamond Mirror 2 and Diamond Advanced Disk Editor (DADE).

Re-designed from the ground up with the user in mind, Diamond Edge 2 is the most advanced, easiest-to-use disk management system available for TOS computers. It is fully compatible with all Atari computers and disks, disk formats, TOS versions, and alternative operating systems like Multi-TOS, Geneva, and MagiX.

Protect yourself from data loss with Diamond Edge 2 at a great, value-for-money price; comparable software on other platforms costs over £100. Diamond Edge 2 is economical insurance against disk problems and data loss. You simply cannot afford to be without it! Upgrades include a completely re-written and expanded manual.

Diamond Mirror 2



The Diamond Mirror Configuration dialog

Diamond Mirror 2 (use regularly to 'snapshot' your drive) has been greatly enhanced to include complete testing of disks at boot time as well as keeping backup copies of Mirror Files.

Upgrades →

Upgrades from version 1 of Diamond Edge cost only £29.95 - just send your master disks back with your remittance. Silver or Gold support customers can order over the phone with a credit/debit card - please call for details.

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Softly does it

The world of computer comms is infested with jargon words, acronyms and protocols but you don't need a team of computer experts to get up and running. Ofir Gal presents the simplest way to avoid problems.

The most serious problems modem users face are to do with Atari's inconsistent management of the serial ports. At first sight it would appear that the hardware and software teams in Sunnyvale were not on speaking terms for a few good years. While the hardware was improved with the introduction of the TT, the software side, namely TOS, stood still. In addition, there are various bugs and deficiencies in the serial port handling.

There are many patch programs available to address the various bugs and until recently it was quite a task trying to figure out which patch to use with your particular setup. These patches are normally Auto folder programs, sometimes accompanied by a CPX module and somewhat vague – if not foreign – documentation.

HS-Modem is the best solution to the problem. Instead of having to worry about which patch you should use, HS-Modem provides a global solution to all serial port bugs and at the same time it optimises its handling. HS-Modem can make a big difference in transfer speeds and reliability, depending on your setup. Had Atari continued to develop TOS, it is very likely that parts of HS-Modem would have been integrated into the operating system.

Also HS-Modem enables Falcon, TT and Mega STe users to access the baud rates above 19,200 even with programs that don't support the higher speeds. HS-Modem is currently at revision 6. What's more it is freeware and available from most BBSs, not to mention this month's Reader Disk.

That's the good news. The bad news is that HS-Modem is a complicated to install with confusing documentation and an even more daunting configuration program.

Installing HS-Modem

HS-Modem comprises of a number of small programs. In order for the whole thing to work, you must install DRVIN.PRG in your Auto folder, followed by whichever driver your machine needs.

Two serial chips are used in the Atari range of computers uses. The ST uses the multi-purpose MFP chip which was more than adequate in 1985. It is capable of data transfers at 19,200 baud (almost 2K a second) and can even be pushed to 38,400 with minor modification. The STe and Mega ST use the same chip, but the Mega STe and TT have an additional, superior chip - the SCC. The MFP chip was retained for compatibility. On the Falcon, the MFP is not used for serial ports at all and the SCC is used to control both the serial and LAN ports. The SCC is capable of 153,600 baud (about 15K per second) or even more. This makes it suitable for the fastest modems available and quite effective for networking. On the Mega STe and TT, the MFP is connected to the port labeled Modem 1. The other ports are SCC controlled.

On an ST you have no choice but to use the driver called MFP.PRG to drive the MFP port. If you have a TT, Mega STe or Falcon then use SCC.PRG to fix the bugs on the faster SCC port. The other drivers are there for more unusual configurations. Copy the relevant driver into your Auto folder after you've copied DRVIN.PRG into it.

Configuration

All the programs and drivers are configurable with the help of SETTER.TTP. This program could easily win the "worst user interface of the year" award, but the results are worth the trouble.

If you prefer, there is a GEM version called SETTER.PRG, but this one is even worse in my opinion. Whichever you end up using, HS-Modem only requires setting once. The easiest solution is to drag and drop the driver on the SETTER.TTP icon if you have a modern TOS or desktop. On older TOS versions, just double-click on SETTER.TTP and enter the path to your Auto folder and the driver name. When using the TTP version, most questions are answered by typing Y (yes) or N (no) followed by a Return.

DRVIN.PRG has two user options. FASTINT should be on regardless of configuration. This speeds up the operating system routines allowing 38,400 and 57,600 baud on standard STs with a modified serial port. The second option, EXOPEN, should be disabled. This option is there for future developments and for testing programs. Once DRVIN.PRG is loaded, the drivers SCC.PRG or MFP.PRG can be loaded too.

HS-Modem on the ST

If you have an ST, STe or Mega ST, you will need to install MFP.PRG. The purpose of this program is to remove the hardware handshaking bugs as well as to accelerate the serial port.

The first option, RSVE, should be enabled only if you have installed the hardware mod. HISP is the second user option. If enabled it allows RSVE-aware programs to access the higher baud rates directly. REPL allows you to reconfigure the baud rate remapping. Normally, if you have installed RSVE, selecting 110, 134 or 150 baud gives access to 38,400, 57,600 and 115,200 baud respectively.

This is fine, unless you have a program that does not allow the selection of these rates. REPL allows you to remap other baud rates. If you don't have RSVE then just enter U and return six times. DTR is the data terminal ready signal which is best set to Y for maximum compatibility. The advantage of setting DTR to N is that the modem will not hang up if you reset the system. RBL and TBL are the receive and transmit buffer sizes. These are set to 256 bytes by default, but it's always a good idea to increase them if you can spare the memory. Normally, a receive buffer of 16-32K is ideal with a send buffer of 8K. A larger buffer minimises the chances of lost data. Remember that the values are entered in bytes. The possible values range between 16 and 65534 bytes. The last question is simply whether to save the new settings, enter Y to complete the configuration.

Atari World recommended setting for a standard ST:

RSVE	N
HISP	N
REPL	U (six times)
DTR	Y
RBL	16384
TBL	8192

A meaningless jumble of German and English computer jargon. Like it or not, you have to go through it once if you want to get the most out of your Modem.

```
 / Enter new values. Mark place invalid by input of u.
Platz / place Nr.1 : u
Platz / place Nr.2 : u
Platz / place Nr.3 : u
Platz / place Nr.4 : u
Platz / place Nr.5 : u
Platz / place Nr.6 : u

 Informationstext / information text :
DTR: Einstellung des DTR-Signals beim Treiberstart
Ja   = aktiv (wie bei TOS)
Nein = inaktiv
 Aktuelle Einstellung / current setting : Ja. / Yes.
  Eingeben: _J_a oder _N_ein. / enter: _Y_es or _N_o.
y

 Informationstext / information text :
RBL: Einstellung der Empfangspuffergröße in Byte.
Standard: 256,  Minimum: 16,  Maximum: 65534
 Aktuelle Einstellungen / current settings :
                                256
Platz / place Nr.1 :

 Neue Werte eingeben, Platz ungültig markieren durch Eingabe von u.
 / Enter new values. Mark place invalid by input of u.
Platz / place Nr.1 :
```

The GEM version of the HS-Modem configuration program could have been useful. In practice, it doesn't make much of a difference.

HS-Modem and the rest

If you have a TT, Mega STe or Falcon, you will probably want to use the SCC driver - SCC.PRG. The SCC is a powerful chip which is perfectly capable of data transfer of more than 20K a second, while TOS only allows you to select a top rate of 19,200 baud. Due to these machines having several ports the settings can be a little difficult.

The first option, M2TT is best left as U where HS-Modem automatically detects which machine it's running on. M1EMU is also best set to U for automatic machine detection. The Falcon is the only Atari machine that does not have an ST-compatible modem port. If set to U, the Modem 1 emulator will help some older programs run.

The next three options are specific to the LAN port and are only of interest when using the LAN port for networking. Like the ST, you can set the DTR signal behaviour for both SCC ports via DTRM2 for Modem 2 and DTRS2 for Serial 2. RBLM2 and TBLM2 are used to set the Modem 2 receive and transmit buffers size while RBLS2 and TBLS2 do the same for the Serial 2 port. If a port is not used it's best to set both buffers to 16 bytes.

Atari World recommended setting for a Falcon and a Mega STe (using Modem 2):

M2TT	U
M1EMU	U
LANBIT	N
LANEXT	N
LAN_S2	U
DTRM2	Y
DTRS2	Y
RBLM2	16384
TBLM2	8192
RBLS2	16
TBLS2	16

The facts on fax

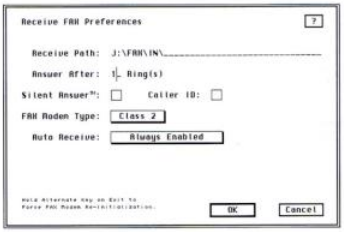
Ofir Gal reveals all you'll ever need to know about faxing from your ST.

The fax machine has become a standard item in offices and in many homes. It is a useful, time and money saving gadget, not only for the business but for leisure activities too. A one page fax takes less than a minute, making it almost as cheap as posting, but a lot quicker and you can usually get straight through to whoever you're after.

Modems and fax machines have a lot in common. The truth is that faxing is a minor task for today's sophisticated modems. Indeed, the vast majority of modems sold these days have faxing abilities thrown in for free. All you need to provide is the software – a program that can communicate with your modem and turn it into a fax machine. There are several on the ST, although STraight FAX is only one is available in English.

STraight FAX is available from System Solutions and supports both Class 1 and 2 as well as V.17 and V.29 protocols (see the accompanying panels). Published by Toad Computers in the US, it is currently at version 2.20. The program is capable of converting text files as well as First Word Plus files into fax images. It also includes drivers for That's Write, Calamus, GEM-View and Pagestream that allow these programs to generate nicely laid-out faxes. GDOS and SpeedoGDOS drivers are also included for programs like Papyrus and Timeworks. STraight FAX can run either as a standard program or a desk accessory.

TeleOffice is a commercial German program with a shareware version called Junior Office which is quite a capable fax program in its own right. The main problem with it is that it is all in German, although an English version is imminent. Like STraight FAX, it supports both classes and protocols. Junior Office works like a DTP package where you can freely place text and graphics on the page and then fax the result. While being simpler and slower than STraight FAX, this program does look promising and is also MagicMac and HS-Modem aware.



It is possible to set your fax program to automatically answer the phone, just like a fax machine, or to do it manually.

How does it work?

Faxing from your computer is quite a complex affair which is thankfully hidden from the user. Normally, sending a fax is just a case of pressing a mouse button. But what happens when you click the Send button on your screen?

First of all, the text is converted into an image at a resolution of 98 by 196 dpi (normal resolution) or 196 by 196 dpi (high or fine resolution). This is done by using GDOS or an equivalent, or by the fax program itself. Once image rendering is complete, the image is compressed. Compression is very effective at minimising transmission time. A high resolution A4 page image can be compressed down to less than 50K, depending on the amount of detail.

Your modem then dials the receiving fax machine (which itself contains a modem) and negotiates a common speed which will depend on the capability of each modem and the line quality. Transmission of the image follows at a rate of approximately 1K per second. Once a page is received, the receiver sends a page acknowledge or error code to the sender. Current protocols and hardware do not allow re-transmission, so many errors can result in the sender hanging up, although this is pretty rare. A hard disk is a must for reliable faxing.

One of the biggest advantages of using a fax/modem is that unlike a fax machine, there is no scanning involved. You do not have to feed the pages one by one, and the quality of your faxes will surprise the person at the other end. Other advantages include the ability to maintain a fax numbers book within the fax program, or to use OCR to convert faxes back to text.

Jargon buster

V.17 – A fax protocol for transmission at 14,400 baud. The latest 28,800 modems support this faster protocol as well as newer fax machines.
V.29 – A fax protocol for transmission at 9,600 baud.
OCR – Optical character recognition. A computer program that can "look" at an image and convert any text in it to ASCII text. Once in that form, the text can be edited just like any other text file.

Groups and classes

The very first fax machines took six minutes to send a single page at a resolution of 98 dpi. These Group 1 faxes are now obsolete, but some

Group 2 faxes are still in use. These work at 100 dpi but only take three minutes to send or receive a page. The majority of fax machines and modems in use now fall under the Group 3 banner.

Group 3 features two scan resolutions, selectable by the user as well as built-in data compression and a typical transmission time of under a minute per page. The compression system used is very similar to the one used in IMG and some TIFF files and is known as run-length-encoding or RLE for short. Group 4 is a new standard for fax transmission over ISDN, the data transfer system for the future which is in use by some businesses.

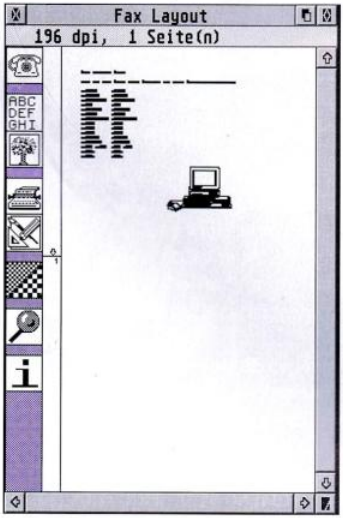
All modems capable of faxing support the Group 3 protocol. However, the way in which the computer and fax modem communicate is the subject of yet another set of standards. Class 1 requires the computer to do most of the hard work of rendering the page and compressing the resulting image. The main advantage of this is that any changes and enhancements of the protocol can be added by simply updating the software.

A Class 2 fax modem is cleverer and can relieve the computer from the compression part of the task. Class 2 is less likely to suffer from transmission errors because it does not depend on a fast computer at each end to do the hard work. The biggest problem with Class 2 is that there actually two protocols. The old and unofficial "plain" Class 2 and the new official Class 2.0. So, although it's best to go for Class 2, it's also advisable to confirm that the software and modem you purchase are compatible.

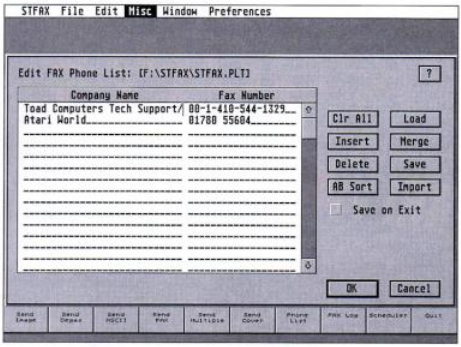
In addition to the existing classes, there are two more in the pipeline. The future of Class 3 is in doubt – its main purpose is to lighten the load on the computer even further by converting the text to an image. Class 4 is based on Class 1 but uses buffering to improve reliability. ECM is a proposed standard that will allow the receiving fax machine to request the sender to re-send portions of the page. Currently, none of the fax protocols supports this or any other form of error-correction.

To check which classes you modem supports, use any comms package like Stalker or Connect and type the following line:

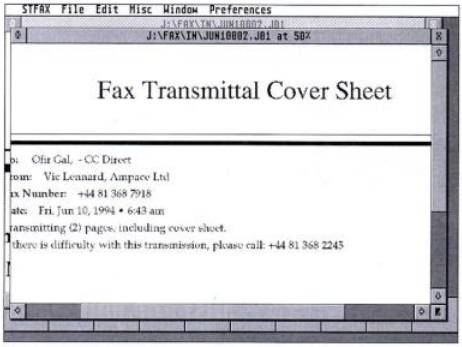
```
AT+FCLASS=?
```



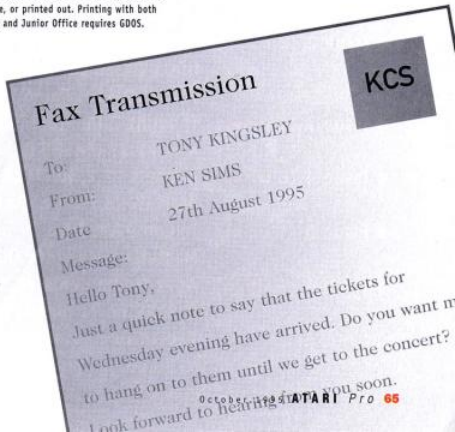
Junior Office features a layout window where text and images can be freely inserted and moved, just like a DTP application.



STraight FAX allows you to maintain several phone books, each containing up to 100 entries. Junior Office has a similar facility. Simply select the number with the mouse and send it off.



Received faxes can be viewed on screen, saved as an image file, or printed out. Printing with both STraight FAX and Junior Office requires GDOS.



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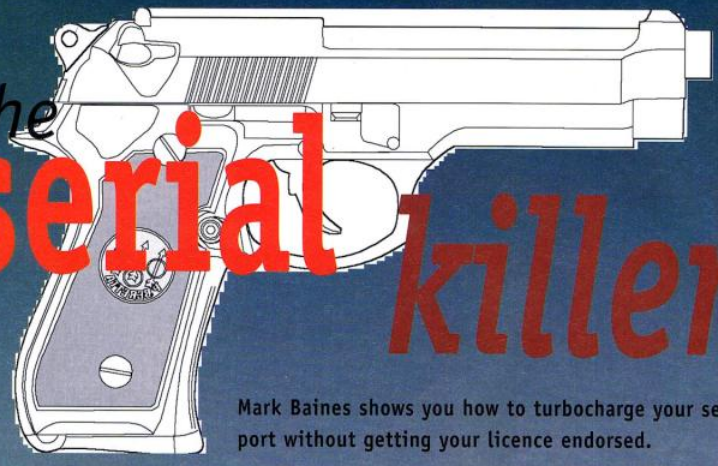


The serial killer

Mark Baines shows you how to turbocharge your serial port without getting your licence endorsed.

V32bis (14,400bps) and V34 (28,800bps) modems are getting cheaper all the time. With V42bis data compression these modems can give data transfer rates greater than twice their carrier signal rates. However, the ST serial port hardware has a maximum speed of 19,200bps. The modem to modem connection may be working at full speed but the serial port has to repeatedly tell the modem to stop so that it can clear its buffer to make room for more data. That means it is the speed of the serial port that determines the maximum throughput of data when downloading files and not the modem. So, how would you like a serial port speed of 38,400bps – twice the normal maximum and all for a fiver?

Mega STe, TT and Falcon owners don't need this modification because their SCC controlled serial ports can handle speeds up to 153,600bps. Slower modem users also don't need this mod – unless they plan on upgrading, of course.

The plan

The serial port is controlled by a Motorola 68901 – the Multi-Function Peripheral chip (MFP). In it is a USART (Universal Synchronous/Asynchronous Receiver/Transmitter) which is the serial interface part of the chip. The MFP provides four timers, A, B, C and D (TA-TD Output and TA-TD Input in Figure 1). Timer D Output on pin 16 creates the bit rate clock signal for the USART and this is supplied to pins 7 (Transmitter Clock) and 10 (Receiver Clock) via tracks on the motherboard. It is this signal that limits the maximum speed of the serial port. In order to modify the chip so that a higher signal can be inputted to these pins, pin 16 must be disconnected from pins 7 and 10.

We then need to supply a higher clock signal from another source. Pin 18 (XTAL2) of the MFP provides a clock signal of 2.4576MHz. If we can divide this by four we get 614,400Hz which can be fed to the motherboard track below pin 16 of the MFP and so to pins 7 and 10. The USART in the MFP will further divide this signal by sixteen giving a bit rate of 38,400Hz for both the transmitter and receiver clocks.

We need a 4040 chip to divide the clock signal from MFP pin 18. Maplins sell a 4040 in the 74 series called a 74HC4040N, also known as a 12 Stage Ripple Counter. This chip needs power on leg 16 which can be supplied from pin 11 of the MFP. The signal from pin 18 on the MFP is supplied to pin 10 of the 4040 which then outputs the new signal on pin 7.

Disconnecting pin 16 of the MFP from the motherboard will cause all the old port rates to be unavailable, with 38,400bps being the only one you have. This shouldn't be a problem as your modem will automatically cope with slower modems. However, if you need to connect your ST to another computer where you need a slower rate you will have to switch the mod off. This is also necessary for some fax programs and fax modems.

A switch will need to be mounted through a small hole drilled in the ST's case. There are many suitable places at the back or sides. Mega ST owners can use the removable panel at the back. All that is necessary is to reconnect the MFP pin 16 to the motherboard or supply the new 4040 pin 7 signal to the motherboard. A miniature single pole switch is ideal.

The nitty-gritty

See the boxes for a list of the items you will need. Wearing an earth wrist strap is recommended. Mounting the 4040 chip on a piece of stripboard makes it easier to handle, solder wires to and finally site. The tracks need to be cut with a sharp knife so that the legs aren't connected (see Figure 3). The chip's legs fit into the holes and are soldered into place. Trim the legs on the other side and cover with insulating tape so that no metal shows. If you cut a big enough piece of stripboard the outer series of holes on the tracks can be used to solder the wires to rather than disturbing the legs again. You can try placing the 4040 chip on top of the MFP without a mounting board by cutting the unwanted legs off and using short pieces of wire to connect the pins.

Open your ST (screws in round holes only) so that you have access to the motherboard. On a STFM the MFP 68901 chip is at the back on the right underneath the floppy disk drive. You can remove this by undoing the screws underneath (square holes) and carefully removing the data and power cables. Make a note of which way

Warning!

Note that as with all hardware modifications, we can't be responsible for any damage you may cause whilst performing this modification. If you're in any doubt, have a professional do it for you.

round they go before removing them.

On the Mega ST, the MFP is underneath the power supply which is easily removed by undoing two screws, pulling off the power cable and easing the whole thing out of the sockets at the back. It's easier than it looks.

The MFP chip is rectangular, has 48 legs and should have "MC68901" written on it. Note the end with the 'notch' – a semicircular indentation on the chip surface. This marks the end where pins 1 and 48 are. Looking down on the chip pin 1 is always to the left of the notch and numbering occurs down this side and up the next, see Figure 1. Locate pin 16 and with a pair of snips that cut right at the tip, cut the leg as close to the motherboard as possible. Very gently partly bend up the remaining bit of the leg away from the board. Clear the hole with soldering braid or a solder sucker.

After very carefully drilling your hole, mount the switch in the case with the locking nut provided. Connect a piece of wire from where pin 16 was connected to the motherboard to the centre common terminal of the switch and another piece from the remaining part of pin 16 to one of the other terminals as shown in Figure 4. Make sure that the wire is out of the way and doesn't snag anything. The single core wire is easier to solder and stays in place once bent into position. Remember that you will have to put back the floppy drive or PSU so don't just stretch the wires across the space.

Decide where to place the 4040. Wires must be as short as possible, especially the one linking the MFP pin 11 and the 4040 pin 16. A good place is on top of the MFP and there should be enough clearance between the drive or PSU and the MFP with the 4040 on top but check first before soldering into place!

Home stretch

Study Figure 4 very carefully. Where wire lines cross, they are *not* joined except at the one place indicated. Connect a wire from pin 7 of the 4040 to the remaining switch terminal. All the wire connections are so:

MFP chip	Switch	4040 chip
pin 11	-	pin 16
pin 18	-	pin 10
pin 34	-	pin 8 and 11 joined
-	B	pin 7
pin 16 leg	A	-
pin 16 motherboard	C	-

Pins 8 and 11 on the 4040 chip should be joined together with a short piece of wire and then another wire taken to pin 34 on the MFP from one of these pins. The stiff wires should hold the chip firmly in place and as close to the MFP as possible. Make sure that no bare wires touch another part of the board. As with the bottom of the stripboard, cover the top of the 4040 with some insulating tape. No part should touch the bottom of the drive case or PSU! Reassemble and label the switch positions.

Lastly... Don't worry if your software will only allow you to set a serial port speed of 19,200bps. You will have 38,400bps at the port and the modem and software will automatically cope. Set terminal programs to 19,200bps. LinkleyTerm users should put Carrier 80, Hard38400 and Baud 38400 in the configuration file.

Whatever TOS you have, it is highly recommended that you use the HSMODEM serial port patch as this contains fast, optimised code for the port.

Don't forget that I can't be responsible for any damage you do to your machine in carrying out this modification. You do it at your own risk – but if you're up to it, rest assured you'll get a lot more throughput from your modem than you did before!

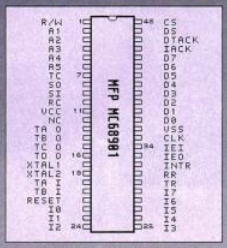


Figure 1 - the MFP MC68901 chip pinouts.

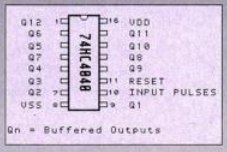


Figure 2. - the 74HC4040 chip pinouts.

Components

The following is a list of components from Maplins catalogue (Sept. 1994 - Aug. 1995) which is available from newsagents. If you can't find it try telesales on 01702 554161 and fax 01702 553935.

Part	Maplins Order Code	Page	Cost
SN74HC4040N chip	UF02C	671	£1.11
Single pole switch	FH00A	790	£0.95
Solid core wire	BL85G	470	£0.45
Stripboard (optional)	FL17T	623	£2.69
Insulating tape	FT20W	397	£0.30

List of tools - all available from Maplins

Wire stripper
Snip cutter
Soldering iron with small tip
Solder
Desolder braid to clear around MFP 16 hole Earthing wrist strap
Drill with 1/4" drill bit
Crosshead screwdrivers to open case Pliers to remove shielding
Hack saw to cut stripboard
Sharp knife to remove stripboard copper tracks

Some of the items you may need to complete this modification. All pretty straightforward stuff.

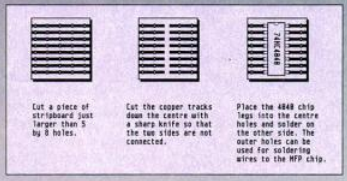


Figure 3 - preparing the stripboard and mounting the 4040 chip.

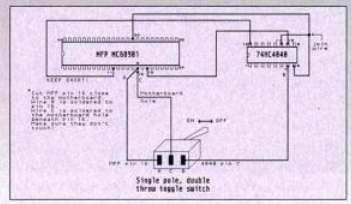
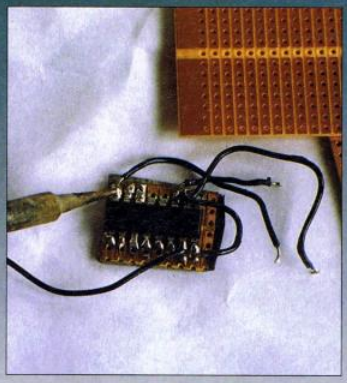
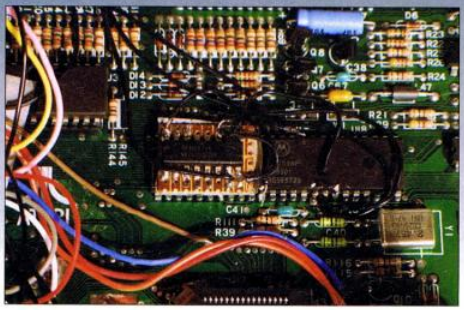


Figure 4 - the wiring diagram. Crossing wires do not join except at the one place marked. It's easier than it looks - honestly.

Getting a bit crowded back here! Mount the switch in a suitable place and label the positions. It's the yellow one, by the way.



The 4040 chip fits perfectly on the stripboard and enables the wiring to be made more easily. The single core wire is a doddle to strip, solder and bend into shape.



The finished modification with the mounted 4040 chip soldered into place atop the MFP chip. All it needs now is a piece of insulating tape on top and reassembly of the computer.

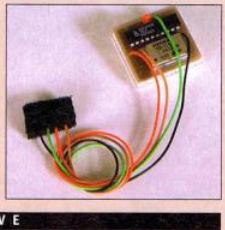
RSVE

Ofir Gal takes a look at the commercial alternative to serial port acceleration.

If you are not the sort who likes too much soldering, System Solution's RSVE board may be the answer. Designed to enhance the Modem 1 port on all Atari computers except the Falcon, it is especially useful for the ST, STe and Mega ST. This hardware solution requires minimal soldering. The module has four wires – one connection for power (+5V), another for earth and two wired to the MFP chip. The board sits on a sticky pad and can be placed anywhere inside the ST case. It has an LED to indicate operation, although this is not visible once the ST is reassembled.

Once the board is installed, you also need to install the MFP driver from the HS-Modem package which is also supplied on disk. Once installed, the new baud rates of 38,400, 57,600 and 115,200 are available to communications programs. Some programs, like Connect, are RSVE-aware and automatically make the new speeds available directly. Other programs can access the new speeds by simply selecting 110, 134 and 150 baud instead. The package includes an installation sheet and a disk containing the required programs to copy into the Auto folder.

A standard ST works at 38,400 without much trouble, but to get 57,600 MagiC is recommended. The top rate of 115,200 is only a theoretical possibility; in practice the ST serial port simply can't cope.



The RSVE board is simple to install and includes an LED that you never get to see...

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Silver service

Ever wondered which online service you should try out? Our comms correspondents give you the lowdown...

Bulletin Boards (BBS)

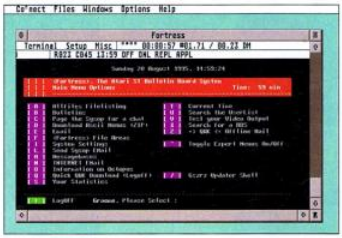
Bulletin board systems (BBS) offer Atari users a cost effective way of getting on-line. Atari related boards are spread around the country and most take a number of different message networks, so whichever boards you call you can still talk to people on most other Atari boards. In addition they offer public domain and shareware files for downloading and private email to other users. More and more boards are also offering Internet email access.

Because most privately run bulletin boards are run on a single line you will almost always have a limit on the amount of time you can spend on the board in any one day. For similar reasons there is also often a limit on the amount of software you can download.

All you need to connect to a BBS is a modem and a standard terminal program. Most boards have a range of emulations available (from standard ASCII up) so any terminal will do. Uniterm and the FreezeDried terminals are very good for users of 8MHz machines, although they don't have GEM interfaces and the latter is a problem on a Falcon. Terminals such as STalker and Connect are full GEM programs and offer a wide range of features.

Almost all privately run BBS systems are free, apart from the cost of your call. As they mostly share a common message pool it makes sense to find one as close to you as possible. You'll often find that the sysops of these boards will also have a subscription service, offering fewer time and download limits. These are often very good deals and are usually run on a non-profit basis by the sysop – all proceeds are piled back into BBS funds.

Graeme Rutt



Fortress – good board, friendly sysop, very typical of most Atari boards.

NeST

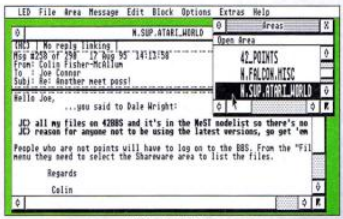
NeST (Network ST) was set up by Atari enthusiasts and is the largest dedicated Atari network with "nodes" in dozens of countries. It is completely free and provides an excellent forum for discussion on a wide range of topics. Messages are "echoed" between BBSs and may be read by anyone taking the echo.

Private correspondence should be sent by netmail, or via the recently developed Internet gateway, although confidentiality is questionable. Most Atari BBSs take some NeST echoes, entirely at the discretion of the sysop, so ask nicely if you want a particular echo and make sure they're taking the Atari World one!

Echoes cover individual topics, for example, programming, comms, DTP, graphics, MIDI, hardware and CD ROM. On a lighter note there are some general echoes including, for sale, consoles, sci-fi, a common room where chaos rules and a Q&A area where everything from particle physics to blocked drains can be mulled over.

If you're into games there's a games echo and a Multi User Game (MUG) called Space Empire Elite which runs across the network so login and launch your own inter-BBS attack!

BBSs compete with each other to offer the latest non-commercial software so the chances are you'll find an excellent selection of software on your local board. If a particular file isn't available locally it can be file requested from another BBS, although this may take several days to arrive if it's stored at the opposite end of the network.



NeST is a dedicated Atari system.

NeST thrives on participation so don't just login and "trough" a BBS by downloading software without doing your bit by uploading some files or taking part in the message areas.

All you need is a modem, some comms software and an off-line reader. If you need help, most boards include an option to call the sysop for a chat or leave a private message if they're unavailable. A friendly sysop makes all the difference and 42BBS, run by Colin Fisher McAllum, is actively looking for new members so why not give it a call on (01256) 895106.

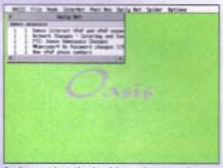
Joe Connor

The Internet

Any Atari can be used to access the Internet. You can either use a direct connection provider (such as Demon, Cityscape or Frontier) or a buffered connection (such as CIX). The main differences between the two are the types of software used (a direct connection requires specialised programs, a buffered connection only requires a standard terminal) and cost (direct connections have no time charge).

Both services give you access to all the text based resources the Internet has to offer. You can download software, search for information, read newsgroups and have real time chats with other users. The Atari computer has always had an avid and vocal Internet userbase and there are a wide range of resources to use and people to speak to.

A direct connection to the Internet needs special software to provide the network protocols your service provider expects. This is generally provided by the NOS software package which is available as freeware. Recently the TOS programs that come with NOS (newsgroup and email readers) have been replaced by Oasis, a package that uses GEM to let you to read/send news and email.



Oasis — at last the Atari has a decent package for Internet access.

A buffered connection requires nothing more than a standard terminal program. However, some functions need a specific terminal emulation such as VT100 or ANSI. Uniterm and Connect offer the correct emulations and work well with CIX.

Direct connection providers generally charge a one-time setup fee followed by a flat rate monthly charge – there are no other time charges. The setup fee ranges between nothing and fifty pounds. The monthly rate ranges between £10 and £20. Most have local telephone numbers spread around the country.

Graeme Rutt

CompuServe

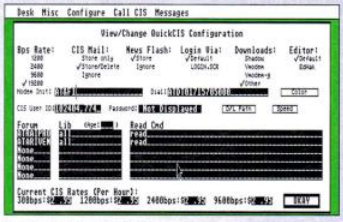
CompuServe has always had a reputation for being expensive (it is known as CompuSpend in some circles) but the latest round of price cuts has put it right back on par with the other online services. For $9.95 a month you get up to 5 hours free access and every hour after that you pay £2.95 an hour. You pay by credit card in US dollars so the eventual cost depends very much on the exchange rate.

For your money you get access to one of the best organised of all the online services but it has to be said from the outset that getting logged on using an Atari isn't always that easy. If you tap into it using a standard comms package, you'll find it anything but friendly as the service is now designed for CompuServe's own PC and Mac software.

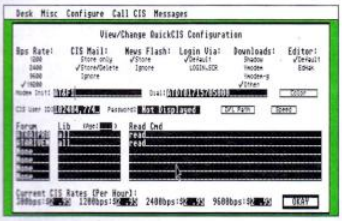
An Atari program called QuickCIS is a much better bet and this lets you log on automatically, scan the forums you want to for messages and new files and then log off again. You can then read the messages offline and read the file descriptions at your leisure, logging on again to download the ones you decide to take a look at.

The Atari forums aren't that active and the majority of members are from the States but if you want a more cosmopolitan view of the Atari scene, it's well worth trying. However the non-Atari specific forums are superb - and that includes the MIDI, graphics and DTP forums where you can get samples, clip art and fonts. Other treats are up-to-date share prices, world news and weather maps (you can even view them as GIF files) to name but a few. Oh, and don't forget direct Internet access if we ever get an Atari web browser!

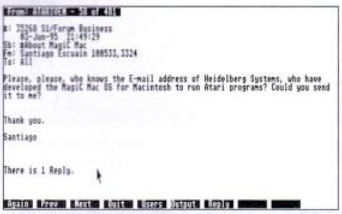
Andrew Wright



Cixread, the Atari OLR, greatly simplifies the use of CIX and also saves quite a bit on connection charges.



Access to CompuServe is easy enough with QuickCIS.



Logging on it may look complicated but it's all automated really.

CIX

With all the current hype about the Internet, CIX, the Computer Information Exchange, is managing to grow at a healthy rate. Oddly, CIX is not an Internet provider as much as a very large BBS.

At its core is the conferencing system. There are 5,000 conferences dedicated to topics ranging from computing to gardening, where people can discuss and share information. There is an emphasis on computing and the Atari conferences are a virtual meeting place for many users, including most of *Atari World* writers. The Atari file area contains almost 2,000 files - programs, utilities, demos and games can all be found here. If you have a problem installing some utility, or if some program keeps on crashing on you - you are more than likely to find a solution by simply posting a message on CIX.

Unlike the vast Internet, CIX conferences have more of a local pub feel to them. Users "know" each other and are happy to engage in friendly (or otherwise) debates about music, politics or anything else. The DTP enthusiasts will find the fonts and clipart conferences and file areas invaluable. With an average of 12,000 calls a day and a similar number of users, CIX is a very lively and generally friendly place.

Besides the conferences, CIX offers other services including full Internet email facilities, an interactive newsgroups reader and a two-stage FTP access to almost any Atari related software on the Internet.

The worst aspect of CIX is its user interface which is based around a UNIX command line. Happily there is a rather powerful shareware off-line reader for the Atari called CIXCOMM/CIXREAD. This enables users to log-on, fetch their messages and log-off, reading the messages at leisure.

Initial connection is £29.37 with charges of 4.7p per minute cheap rate and 7.05p per minute standard rate. There is no extra charge for email but you have to pay a monthly minimum of £7.34.

Ofir Gal

Getting online

If you want to chat about one of the online services you can call these voice numbers:

CIX	0181 296 9666
CompuServe	0800 289378
Cityscape Internet	01223 566950
Demon Internet	0181 371 1234

FALCON OWNERS GROUP

"THE FALCON OWNERS GROUP has been around for as long as the Falcon030 and is responsible for producing the electronic
publication 'FALCON UPDATE', as well as stocking a healthy public domain library and offering help and support where possible, both on-line and off.

For the last two years FOG has been somewhat in-active while the restof the Atari community has lept ahead. This is about to change withthe brand new re-launch of the Falcon Owners Group. We have madesome large changes inside the club and are now geared back towardsserving any Falcon owner, anywhere."

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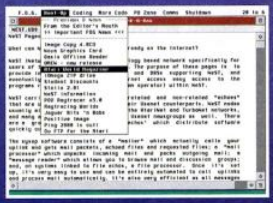
"We are still publishing our electronic magazine FALCON UPDATE andissue 9 out this month. Readers contributions are most welcome andwe will print almost anything we get sent. We are also offering a well stocked PD LIBRARY, packed with 100% Falcon applications from the latest demos to games and utilties. Our prices are lower than you might expect. We also have our own section on 42BBS where you can download plenty of software while catching up with the latest news and
messages. Call now on 01256 895106. Or if that proves too busy you can always check out Chameleon BBS on 01454 881095. So why not cut out the coupon below and send it to us with a blank disk for more information and plenty of free software. You'll be surprised at the change."



"The Falcon FacTT File and 42 BBS wish FOG all the best with their re-launch."

"Please send me more information about the Falcon Owners Group, I include a HD blank disk and first class stamp"

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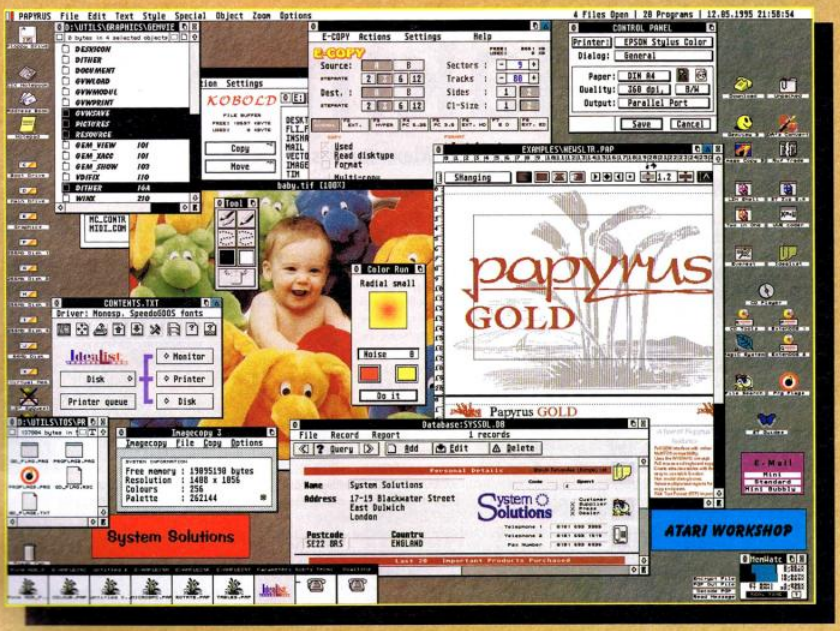

MagiCMac runs Atari programs such as Calamus SL, DA's Layout, and Papyrus much faster than Atari ST or Falcon computers. Programs run four times faster on a Performa 475 than on the Falcon030 and almost ten times faster than the ST. The current MagiCMac package includes the highly regarded Ease desktop replacement. Managing your desktop has never been so easy.

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Feel Like Makin' Web

Graeme Rutt and Alexa Robinson take a last look round, down tools and exit the building site...

A quick YAHOO search provided 33 links for Atari - and those links lead to more!

One of the things that makes the World Wide Web so extraordinary is the way is can bring articles to life beyond the average magazine, with sound and movies. Movies on the Internet are either in MPEG, AVI or Quicktime format. With the Atari's brilliant range of art packages, I don't expect it to be long before conversion programs appear that will take Atari the final step to Web compatibility in the animation and morphing areas. Even though Atari formats as yet will not play inline, you can always offer your Atari movies as a download option for other Atari owners to enjoy. With the download option, be considerate to the Web community and be sure to state the format and size of the file.

Something you don't have to wait for is sound. Atari has always been well known in the music industry, and there are sound programs galore that will give you exactly the format that you need for the Web. If you are the owner of one of the stunning commercial packages, then you are already aware of the power of our platform.

One of the Atari superstores, State side, that comes right into your home via the WWW — with Atari World too!

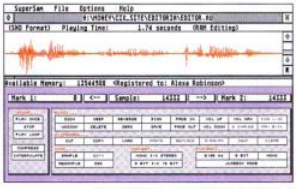
If you are not, then consider a couple of sound packages available on just about every bulletin board I've visited - Winrec and Supersam.

Set up with a Falcon couldn't be simpler. I have my stereo audio cable running from the output or head phone jack on my tape recorder and CD player, straight into the mike port on the back of Falcon and I'm away! Of course there are the MIDI ports if you work with a keyboard or sound sampler, but the point is that good sound reproduction is available without a lot of sophisticated gear.

I have worked with both Winrec and Supersam, and I have to admit the features of Supersam and its ability to resample to other formats and frequencies was enough to get me to register at the very modest fee. I can begin by recording at 22,090 MHz in 16 bit stereo *.WAV format, then alter my settings again and again until I have the right blend of sound quality and file size. To be honest, unless it's that bound-to-be-number-one hit you've just composed, and quality is vital, I tend to stick to 9,000 MHz in 8 bit mono *.AU format for the smallest files possible.

Sound bites, that wonderful phrase coined by the media to describe glib one liners (mostly from politicians!) are perfect to dress up a web site. A word, a scream or a simple sentence offers quick downloads and gives your site a professional feel. And don't forget public domain tapes and CDs, available at every good music store. These are special in the fact that you <I>can<I> copy them freely for distribution, and offer

Of course Jaguar is popular and there are many sites offering the latest news.



This registered version of Supersam is full of valuable web spinners' features!

great sound effects and background music. Originally designed for the public to dress up their home videos, these resources are also perfect for Web sites. Pre-recorded commercial music of course falls under strict copyright laws, so be sure your source says public domain or make your sound samples original!

I guess that about wraps it up for our web spinner series. Without a fully functional web browser yet, Atari is a little behind in the race for the Internet. But don't despair! There are wonderful Atari sites out on the web, growing in numbers everyday. Find your nearest search engine and simply type in A-T-A-R-I, and you'll see what I mean!

Anchors away!

In this last article, we're going to have another look at the nuts and bolts of the Anchor tag. So far we've shown how it can be used to link together pages and graphics but it's capable of much more. As a refresher let's look at the makeup of a tag:

```
<A HREF="something">text or graphic link</A>
```

The "something" can be literally anything - from an HTML page to a GIF to a document in Protext format. What's that, I hear you cry? No browser in history knows how to display a Protext file? Well no, they don't - but the guys who designed the web and the browsers put in plenty of room for expandability.

Most, if not all, browsers enable you to set up "Helper Applications" (that's web-Speak for you) which, according to the extender of a file will send it to a particular program.

In a multi-tasking system (and that's what all browsers run in) this is rather cool since the program can pop up, display the file and then go back to sleep when it isn't needed. And if no Helper Application has been set up for a particular extender? Well then the browser will offer the user the chance to download the files.

This philosophy has enabled many things to be done with HTML Anchors, in particular adding sound and film clips to pages as Alexa has mentioned.

As well as linking to static files or HTML pages the Anchor tag enables you to build a site that links to other sites. For example:

```
<A HREF="http://www.demon.co.uk/">Link to Demon</A>
```

This enables viewers of your HTML page to click on "Link to Demon" and be sent off to the Demon web pages.

In addition you can make links to other types of site: FTP, telnet and gopher. You'd do this by replacing the 'http://' with 'ftp://' (etc.) and following it with the correct site identifier. For example:

```
CIX
Terminal  Setup  Misc  **** 00:02:07 #02,58 / 00.46 DM
        R024 C006 11:00 OFF ONL REPL APPL
230-                    The Archive  --  SunSITE Northern Europe
230-                    ====================================
230-
230-   SunSITE Northern Europe is located at the Department of Computing,
230-   Imperial College, London and is running on a SPARCserver 1000 (with
230-   7 CPUs and 42 GB of disk space) kindly donated by Sun Microsystems.
230-
230-   Local time is Wed Aug 23 12:00:37 1995, you are user number 76 (max 200)
230-
230-   Please read the README files for more information (e.g. what a .gz file
230-   is, extensions to ftp, etc).  Note that if ftp hangs or dies, try
230-   putting a hyphen at the start of your password. Another useful feature
230-   is the  ls -sf:package  command which does a quick scan of The
230-   Archive looking for something called 'package'.  Finally please note
230-   that +ALL+ transfers are logged and any misuse will be acted upon.
230-
230-DISCLAIMER: Neither Imperial College nor Sun Microsystems are liable
230-   for any use, storage or transmission of any files stored on this
230-   archive.
230-
230-   Please email suggestions and questions to  uizards@doc.ic.ac.uk
230-
230-NOTE::
230-:::::::  PLEASE use hostname sunsite.doc.ic.ac.uk to access here.
```

Using CIX to access the Imperial College

```
<A HREF="ftp://src.doc.ic.ac.uk>Link to Imperial College</A>
```

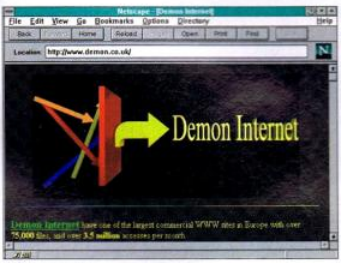
This would link to the Imperial Colleges ftp site.

The final link we're going to look at is perhaps the most important as it enables you to gather feedback from your users quickly and easily. It's called "mailto:" and goes in place of 'http://' and 'ftp://'. Note that it's *not* followed by two / marks. For example:

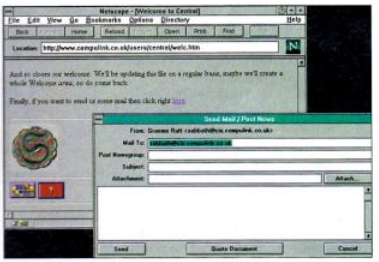
```
<A HREF="mailto:sabbath@cix.compulink.co.uk">Mail to Graeme</A>
```

When a user clicks on the words "Mail to Graeme" on a HTML page a text editor will open up enabling the user to send mail straight into my email account.

And that is it. The web building is over. But you can always mail me on sabbath@cix.compulink.co.uk...



The Demon web site.



Here's what mailto: looks like from the users end...

The Megadeth site, in Arizona, is one of the best sites I know of - sound samples and film clips abound.

Some work is never done...

In the six articles we've not been able to cover everything - there's lots more to learn about the subject. However, we hope that this short series has given you a taste for building a web site with your Atari. It's more than possible as Alexa and I have proven.

If you'd like more information then take a look in your local computer bookstore - there are many books out there on web building, it seems like more are published every week.

From the next issue these pages will be devoted to communications in general. There'll be plenty of information for the novice and expert alike. If you have a web site or BBS you'd like me to feature then get in touch. And remember, if you have any comms questions aim them at the Q&A pages where we'll try and sort you out.

Never mind the language

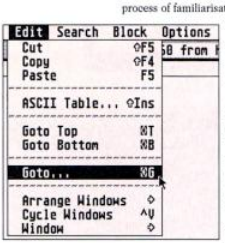
Jon Ellis gives some tips for top GEM programs...

Continuing with our look at the different kinds of interfaces possible for ST programs, this month we focus on the normal GEM application. This is the kind of interface that most users will expect when they fire up a program for the first time: data in windows, program operations controlled by menu options, a mouse pointer to select options and so on.

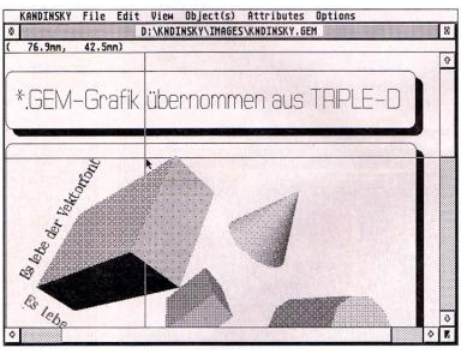
Graphic interfaces like GEM are often hyped on the premise that they are 'intuitive'. None of them are truly intuitive: operating a computer program is very much an artificial activity which has to be learnt. What GEM (and the Macintosh before it) does is to provide all applications with a common look and feel. This eases the process of familiarisation for users - learn one application and you should have a good idea *roughly* how another ticks.

Interface standardisation, though helpful for the user, can prove a sticky area for programmers. Because a program is expected to behave in a certain way, if it doesn't, you can be sure that the user will notice quickly. Even minor departures from the norm can be annoying: how many programs do you know that don't implement window scroll bars properly (or at all)?

If you're just starting out into the world of GEM programming, don't let this put you off. Over the next few issues of Atari World, we'll feature some tips and algorithms for sorting out some of the basic GEM set pieces like drop-down menus and dialogue boxes.



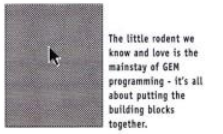
Drop down menus are nothing new.



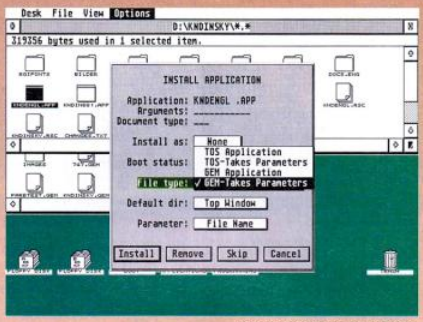
Look through the square window...

Dialogue boxes are the main form of program interaction.

Alert boxes keep you informed.



The little rodent we know and love is the mainstay of GEM programming - it's all about putting the building blocks together.



Installing a program as a GEM application with a command line is easy...

Background briefing: Applications and arguments

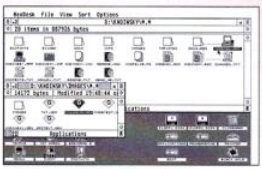
Although the command line is probably most thought of as being something for *.TTP programs, all programs receive a command line when they are started. To be sure, desk accessories and Auto folder programs have no real use for user input in this way. However, full GEM applications can and should process the command line as part of their start-up code.

Since a GEM application is designed to be operated through the normal windows, dialogue boxes and mouse interface, the command line support need not be so comprehensive as it might be on a *.TTP program. For example, a word processor's command line interface might be limited to receiving the name of a file to open immediately on start-up.

How does the user get to provide command lines for GEM programs? There are three main routes. First, through the use of a shell program, just as for *.TTP software. Secondly, newer versions of Atari's desktop allow GEM programs to be installed as taking parameters. When such an application is double-clicked, the normal TTP parameters dialogue box is displayed before the program is run. The same feature is also provided by many modern desktop replacements like NeoDesk.

Thirdly, most desktops also support a drag and drop facility, where the user can pick up files with the mouse and drag them onto an application icon. This runs the application with a command line consisting of the full pathname of the dragged file. This feature is definitely worth supporting in your programs. All you have to do is check the command line on start-up, and once the program's initialisation is done, to call the code for opening a file using the command line argument. Simple to program, and very convenient for the user. If your program supports multiple files open at once, be prepared for the user dragging two or more data files onto the application.

Finally, there is no reason why some application programs, particularly tools like disassemblers or image processing software, should not operate as either TTP programs or GEM applications depending on how the user wants to run them. If the program is executed with a command line, it might perform its work and then terminate without interacting further with the user, just like most TTP programs. If however the command line is absent, the program would use its GEM interface.



Many desktops allow you to drag data files onto applications.

There are a few subtleties to be considered (screen and mouse handling; what about errors on the command line?), but this approach can be made to work well. This kind of hybrid application is what interface programming is all about: flexibility and ease of use for the user, not the programmer.

Tech Tip: MultiTOS add-ons

As a concrete example of how command line support can enhance the usefulness of a GEM program, consider a disk formatter and file utility package. The MultiTOS desktop (though not earlier versions) allows such programs to replace the built-in functions for formatting and copying disks; deleting, copying and moving files. This facility enables extra features, like support for twister-formatted disks to be incorporated into the desktop. In each case, the link between the desktop and the utility package is through a simple command line protocol.

To install a replacement for disk formatting and copying (let's say it's called DISKUTIL.PRG and lives on the K:\ drive), simply add the following line to the MultiTOS GEM.CNF file:

```
setenv DESKFMT=K:\DISKUTIL.PRG
```

Whenever the user requests a disk copy or format operation, DISKUTIL.PRG will be called with a command line that tells it what the user wanted:

```
-c <drive1> <drive2>
   Copy whole disk from drive1 to drive2
   (example: -c A: B:)
-f <drive>
   Format disk in nominated drive
   (example: -f A:)
```

For file operations, there is a similar entry required in the GEM.CNF file (let's say the external program is now G:\UTIL\FILECOPY.PRG):

```
setenv DESKCOPY=G:\UTIL\FILECOPY.PRG
```

The possible command lines that may be received by this program are:

```
-c [-options] [files] [path]
   Copy files to destination path
-d [-options] [files]
   Delete files
-m [-options] [files] [path]
   Move files to destination path
```

In each case, [files] represents a list of filenames separated by spaces, [path] is a valid pathname to copy the files to and [-options] is one or more of the following:

```
-A      Confirm file copies
-B      Don't confirm file copies
-C      Confirm file deletes
-D      Don't confirm file deletes
-E      Confirm file overwrites
-F      Don't confirm file overwrites
-R      Rename destination files
```

It's up to the nominated utility program to perform the requested action, monitor for and inform the user of any errors etc. Of course, the utility also remains available for the user to double-click, as with any normal program, allowing access to any other features not supported by the desktop.

Similar add-on points for MultiTOS also exist for replacing the routines that display and print text files. In these cases, the command line provided to the add-on utility is simply the pathname of the file to be displayed or printed. The relevant GEM.CNF variables that need setting are SHSHOW and SHPRINT.

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Public Arena

New columns for old!

No prizes for spotting we've made a few changes this month! The new layout and the extra page means that even more software is reviewed and we can reward the best software with the extra coverage.

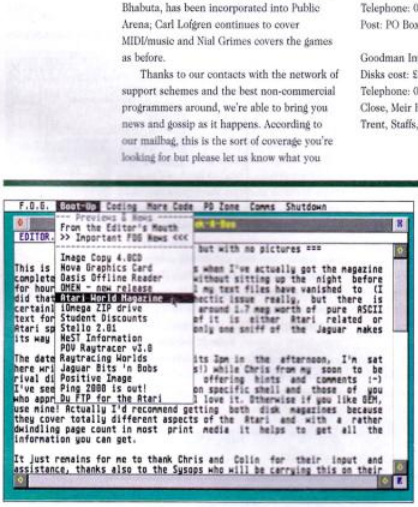
The CyberSTrider files, written by Denesh Bhabuta, has been incorporated into Public Arena; Carl Lofgren continues to cover MIDI/music and Nial Grimes covers the games as before.

Thanks to our contacts with the network of support schemes and the best non-commercial programmers around, we're able to bring you news and gossip as it happens. According to our mailbag, this is the sort of coverage you're looking for but please let us know what you think of the new layout we're here for your benefit so talk to us by post or email at the address on page 98.

You can get the software (unless otherwise stated) from:

Floppyshop
Disks cost: £2.00
Telephone: 01224 586208
Post: PO Box 273, Aberdeen, AB9 8SJ

Goodman International
Disks cost: £1.95
Telephone: 01782 335650Post: 16 Conrad Close, Meir Hay Estate, Longton, Stoke on Trent, Staffs, ST3 1SW



Apart from the opening screen, a game and a demo, what you see is all you get.

FOG Issue 9

Falcon Owners Group • Falcon only

This disk magazine comes archived with only a few bytes to spare on a high density floppy so there's plenty of raw material. The super opening screen hands over to a GEM menu bar crammed with over seventy drop down menu items roughly divided into topics including news, previews, PD reviews, comms and coding.

After selecting a menu entry, an external text viewer called Peekaboo displays the selected text in a scrolling GEM window. Annoyingly, when the text window is open it's still possible to select another menu item which neither updates the text viewer nor opens a second text window and is just ignored.

Apart from the editorial, there doesn't appear to be anything specially written for the mag which is a collection of press releases and postings culled from various on-line sources. However it does provide a useful way for people without modems to keep abreast of the latest gossip from the online Atari community.

After wading through acres of unbroken text the last two menu items provide some much needed light relief. First up is a 'sliding tile' puzzle game, written by the Peekaboo author, which involves scrolling tiles horizontally and vertically into number order, represented by 'domino' style blobs. My patience soon wore thin so I fired up the Chaos Engine demo and relaxed to three excellent animated screens accompanied by an even better soundtrack. It's a tough job but somebody has to do it!

News roundup

David Reitter, the Egale programmer, celebrated his return from the States on a six month study trip with the release of Egale V2.6i which fixes the bugs reported while he was away. Version 2.7i is already underway and due for release around now.

Gemspooler v4 is currently beta testing. The front end has been completely rewritten to be compatible with all operating systems. Colour support has been added and spool files can be compressed.

From the author of WinCom comes a freeware utility called Alice which adds iconify gadgets to all windows under MultiTOS or MagiC3.

Andrew Lee is hoping to add POVShell as the third program in his support scheme although the details haven't been finalised yet expect POV v3 sometime late summer.

The eagerly awaited Kandinsky v2 is now available in Germany where it has been well received despite stiff competition from Arabesque 2. The English release of Kandinsky v2 will cost £30 for new users and requires an upgrade fee of £16 for existing users. The existing v1.73 remain available for £16 so users can decide whether they need the extra features in v2.

Stoop v1.06, the Falcon boot manager, is nearing completion with multi-user facilities and improved group handling. Beta versions should be out during late autumn. Beta testers (also known as guinea pigs!) are welcome!

After this release, Phil Hodgkins plans to take a break from the trials and tribulations of supporting a shareware application and undertake a stress free freeware program...

Finally, from v1.0, the replacement desktop Thing will change from freeware to shareware with a fee of £12. The unregistered version displays "Unregistered copy" in the middle of the screen, which is amazingly annoying, so it should attract some new registrations!

Joe Connor
(jconnor@cix.compulink.co.uk)

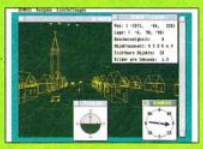
UK Advanced Cryptics Dictionary v1.3

This is a fancy name for a collection of 26 separate word lists, one for each letter of the alphabet, intended for use by setters and solvers of advanced cryptic crosswords. The dictionary currently consists of around 190,000 words, reduced from an original PD list of over 500,000 words by rejecting words not normally allowed in crosswords and using The Chambers Dictionary, Collins English Dictionary and Concise Oxford Dictionary as reference guides.

Ikarus v0.14

Multitasking demos usually include the ubiquitous clock and moving pattern but hopefully, courtesy of Ikarus, you'll be wowed with this interactive virtual village instead.

A separate compass and artificial horizon indicators react as you maneuver your way around the village by keyboard control and various options can be toggled to control the things like cars, flying ducks and magic pyramids and the foreground and background colours are selected using the normal and shifted function keys.



Analysis Calculation V4.6

This program is designed to analyse compounds. Three main tasks can be performed: Calculate the molar mass and percentages from an elemental formula or compound name. Suggest an elemental formula from an existing elemental analysis and calculate the elemental formula from a mass range. Program and accessory versions are included. Key need to unlock registered user only features.

Two-in-One v1.40e

Shareware • all Ataris

Two-in-One is an archive manager that provides a comfortable GEM interface to pack and unpack all the popular archive formats including ZIP, LZH, ARC, ARJ and ZOO without running those nasty TTP programs. You'll still need them but Two-in-One is pre-configured with sensible default settings and all you have to do is locate the individual TTPs using the file selector and save your setup. A new console window replaces the earlier twin view utility to display TTP output.

Other utilities and file viewers can be integrated into Two-in-One and a complete setup can pack/unpack any archive format, create and decode uuencoded archives, scan for viruses, copy/move delete files, optionally using Kobold, and view any file from any archive without extracting the complete archive.

Two-in-One intelligently examines file headers to determine the file type which means incorrectly named and self-extracting archives can be correctly identified and it's even possible to launch executable programs directly from Two-in-One.

Context sensitive online help can be accessed from anywhere within the program by pressing the Help key. The Show info option allows all the file attributes and flags to be edited so you can pension off another separate utility. Registration costs £13 for a key to remove the opening nag screen.

Two-in-One works on all machines but Falcon owners benefit most from the new 3D look and resizable main window.

Everest v3.5E

Shareware • all Ataris

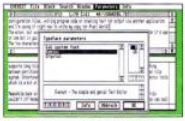
Everest is a fast, easy to use and compatible text editor and this simple combination has established it as the most popular shareware text editor on the Atari platform.

Everest is faster than full blown word processors because it edits ASCII text without providing multiple typefaces, point sizes or page layout options. It's ideally suited for editing program configuration files, writing program code or creating text for output via another application and I'm using it right now to write my copy for *Atari World*!

The minor, but worthwhile, productivity features added to this release don't impact on its ease of use but if you need them they're available. The two characters to the left of the cursor can be exchanged using Alternate — ideal for correcting typos and much quicker than fiddling around with the Backspace and Delete keys. Holding down the Shift key during cut, copy and paste operations adds the marked block to existing clipboard contents instead of replacing it.

If the excitement gets too much and you wreak havoc on your text, there's now an Abandon option in the File menu that lets you revert to the last saved version. Printing via GDOS is now possible along with options to set page breaks, form feeds and the left margin.

Important enhancements include direct Freedom support, external font selector support and drag and drop tweaks for multitasking users. While they're not immediately apparent, it should confirm Everest as the most compatible text editor across all operating systems and desktops. Registration costs £11 for a key to remove the opening nag screen.



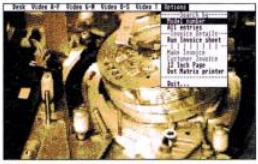
Support for an external font selector is just one of the behind the scenes improvements in this upgrade.

VCR Doctor

Shareware • ST/STe

If your video recorder breaks down there's usually no alternative to getting it repaired by an electrician. Even if you're competent wielding a soldering iron and multimeter, diagnosing the problem without the correct test equipment and experience is just hassle. VCR Doctor tips the balance in favour of DIY by providing a valuable database of insider information on the common faults for most models and what to do about it.

The interface is utilitarian; select the VCR model from the drop down menus then search for a fault by model number or by manufacturer. A built-in invoice generator, obviously written for business use, isn't likely to be much use to most people and the value of the database outweighs the program interface which is ideal raw material for a hypertext. Registration costs £5 for which you're rewarded with the latest version with more fault finding facts and a cute little manual.



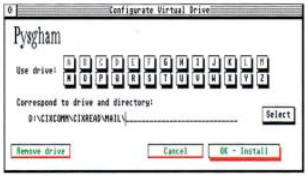
If there's something wrong with your VCR, who ya gonna call? VCR Doctor!

Pysgham v1.50

Shareware • all Ataris

Pysgham can take any folder and turn it into a virtual drive which is seen by TOS and other applications as a real drive. Virtual drives provide an ideal way for applications to gain fast access to files in deeply nested folders. For example assigning a virtual drive W: with the path: F:\DOCS\ARTICLES\AWORLD\PDARENA means any files stored in the PDARENA folder now also appear in the root directory of drive W.

The configuration program (or accessory if renamed to PYSGHAM.ACC) allows up to eight virtual drives to be set up on any drive, including hard disks, floppies, RAM disks and CD ROMs. Additionally the write verify and write protect status for each drive, virtual drive and partition can be set individually. RAM disks are located in memory and there's no need to write verify them though partitions containing programs can be write protected to prevent virus infection and partitions containing essential data should be write verified.



Pysgham drives are set up using this configuration program and drives can be reassigned on the fly without rebooting.

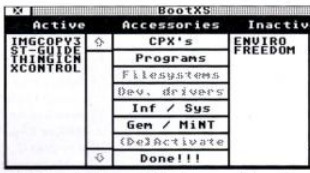
BootXS v2.21

Shareware • all Ataris

BootXS is a quirky boot manager that allows sets of Auto folder programs, desktop accessories, CPXs and other configuration files to be selected at boot time.

Two separate programs are used; AutoXS, which must be installed to run first in the Auto folder and BootXS, which runs from the desktop to configure the individual sets. BootXS is a neat GEM application that steps through each file type asking which files should be included. BootXS does expect each different file type to be tucked away in folders which isn't usually the case and it involves moving files about before getting started but the end result is a tidy root directory.

Unlike many of its peers, BootXS sets cannot be changed at boot time which is a major limitation. The unregistered version is limited to three sets.



After setting up each set, reboot to select between them.

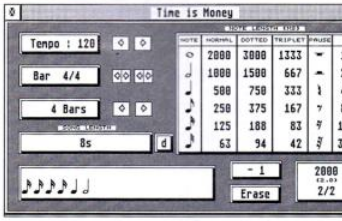
Time is Money

Freeware • all Ataris

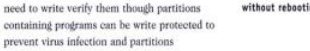
Time is Money is a French music utility capable of calculating some useful conversions between tempo and note values. It can calculate note values from a given tempo, the total duration (in time) of a series of notes, the tempo from a given note length, or the total length (in time).

At first sight these calculations may seem to be far beyond the needs of the average musician, but Time is Money can prove to be a very handy tool in many different situations. For instance, it can be used to calculate the time settings for a delay (ie an echo) to repeat itself in a given tempo. Just enter the tempo of your track, and Time is Money will serve you with the correct note values, for further use with your effects processor.

Time is Money is a neat little accessory and is very useful to have around. It uses less than 25K and runs fine in both medium and high resolutions.



Useful to have around when you're makin music.



Magic Shadow Archiver V2.32

MSA is an unusual disk duplicator. The Disk to file option creates a single MSA archive file containing all the information needed to make an exact duplicate of the disk. At a later date or after receiving the archive via a modem the reverse option, File to disk, can be used to recreate an exact duplicate of the original disk. On-line German and English hypertext help is included.

MiNT programmers manual

The MiNT programmers manual in ST-Guide hypertext format is a straight conversion of the printed manual. Each command is covered is covered on separate pages with appendices covering memory protection, debugging using the pseudo U: drive, all about MINT.CNF, constraints and structures in FILESYS.H for loadable file systems such as Minix.

Memspeed v1.0

This TOS utility is the first Atari program to check the memory bandwidth and can be used to benchmark add-on RAM cards. The bandwidth of the first level cache (L1), second level cache (L2) and the main ST and TT memory are tested where available.

Five to Five 2.11

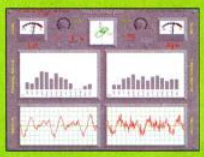
The sample converter 525 has recently been updated to v2.11. Apart for some minor bugfixes, the new version offers frequency conversion and an adjustable low pass filter. 525 is also available for OS/2 (PC) and versions for Macintosh and DEC Alpha will follow.

K-Sculpt 1.4

K-Sculpt is a bank manager for the popular Kawai K1 range of synthesisers, written by Ben Hall (the author of Dump It! fame). It can handle up to eight banks of patches and four banks of multi set-ups at the same time, and it allows you to reorganise, sort, and search for duplicates. K-Sculpt runs on any Atari in both medium and high resolutions.

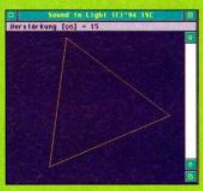
Music Analyzer

The Falcon-only Music Analyzer takes the incoming signal from the microphone input and produces a real-time display consisting of two 14 band frequency spectrums (ranging from 30Hz to 15kHz), two VU meters, two oscilloscopes and one left v right oscilloscope.
Unfortunately Music Analyzer cannot be used as a professional frequency analyser, as some of the lower frequencies aren't displayed correctly, according to the author. This is likely to change in a future version.



Sound to Light v1.0

Sound to Light, is a small application that turns the incoming signal from the microphone input on the Falcon into a light show (and no, it's not written by Jeff Minter!). It's a nice idea but the graphics and the patterns are anything but exciting and beautiful in fact boring is the word.



Midian 1.01

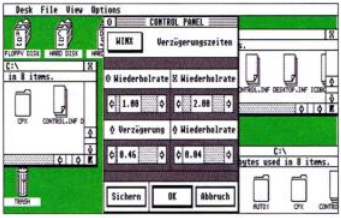
Freeware • all Ataris

A MIDI data analyser is an indispensable tool when trying to learn more about MIDI and SysEx messages and how they work. Midian does exactly that.

Basically, Midian is divided into two sections: the MIDI monitor and SysEx manager.

The MIDI monitor shows all of the incoming MIDI data on the screen, either in hex or decimal. Unfortunately there is no form of guiding interpretation of what the data actually means (such as "note on", "note off", "modulation wheel" and so on).

The SysEx manager is rather similar to other managers out there. It allows you to load, save, receive, request, send or analyse a SysEx dump. Midian can even deal with samples in Sound Designer, Avalon and SoundWorks sample formats, but I wouldn't recommend anyone to use Midian together with samples. This part of the program seemed buggy. Midian requires at least 1Mb of memory and it runs in any resolution except ST low.



Let Midian guide you through the twisted world of MIDI messages.

WinX V2.22

Freeware • all Ataris

WinX is another special utility that you won't be able to live without once you've used it. It modifies GEM's window management routines, removing many of its shortcomings and giving you a much enhanced system to work with.

WinX provides luxuries such as up to 40 windows on screen at any one time compared to the default of eight. Background windows can be moved and scrolled by using the right mouse button and all windows can be moved beyond the edge of the screen. Dragging a window's scroll bar slider even updates the contents in real-time! Other features include the ability to resize the windows in real-time and sending a window to the back by clicking on the title bar.

Although TOS 2.06 and above is needed to make full use of WinX there are plenty of worthwhile features for all the earlier TOS versions. Customising WinX is done by editing a plain text configuration file and a CPX is supplied which lets you set the response speed of window gadgets. WinX requires a companion program, GEMRAM, which gobbles up quite a bit of memory so it isn't recommended on Ataris with less than 1Mb. For those of you who have more, WinX is one utility you can't afford to miss.

Windows can be moved off the edge of the screen and scroll bar arrows can be placed in one corner of the window.

Remote Control

Shareware • all Ataris

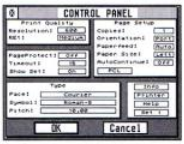
ST users have no shortage of printers to choose from. Settings are usually changed with hardware switches but some printers expect this to be done through software: the HP LaserJet 4L is one. Unsurprisingly the supplied software is for the PC, and none is available for the Atari. Enter the Remote Control CPX modules.

This package contains three CPX modules for the LaserJet 4, 4P, 4L and can be used with the Postscript models too. Admittedly, all the models except the 4L have hardware switches but it is nicer to configure your printer from the desktop.

The CPXs let you change the print quality by altering the printer resolution and the density. You no longer need to print out 'final' copies when you just want a test draft copy. Along with being able to configure the Resolution Enhancement Technology, page setup and font, those of you with the Laserjet 4 and 4P can also input PCL commands.

Each CPX features online help and settings can be saved as sets, loadable with a mouse click. A popup menu provides an easy way to cancel printing and reset to default factory settings.

The unregistered version is fully functional, albeit in German. Registered users receive an English version, so if you're lucky enough to own a Laserjet, take a look at this.



A simple yet elegant solution to configure your Laserjet.

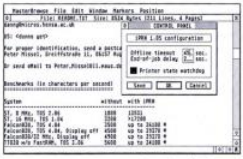
iPRN V0.45 Demo

Shareware • all Ataris

TOS has very slow printing routines. This is not so bad for plain text but printing files from graphics intensive applications is painfully slow to say the least. There are a few programs that speed up the printing process, and iPRN is the latest in this genre.

It replaces the TOS routines which handle printer output with its own ultra fast ones: acceleration is up to eight times as fast as with plain vanilla TOS! iPRN goes further by giving you printer status tracking. This is where iPRN knows whether the printer is busy or in an error condition: off-line, power off, no paper. Thus it knows in advance if the printer is ready to receive data. Practically this means that if the printer is not ready when you issue a print command, you no longer have to wait for 40 seconds — the error message appears instantly!

Printer status tracking only works once per session in the unregistered version. The tracking is deactivated once the printer has been offline and the system reverts back to the 40 second delay. iPRN costs £13 to register which entitles you to the latest unrestricted version (1.05) and comes with a configuration CPX. This lets you set the length of the offline timeout, toggling the status tracking and even Desklet printer activation! If your printer sees heavy use, take a look.



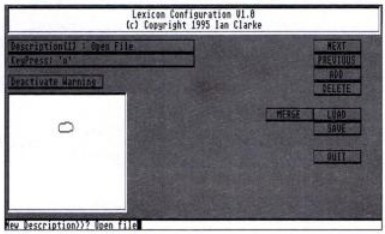
Save time (and money?) by using iPRN.

Lexicon V1.0

Freeware • all Ataris

While the keyboard is great for typing text, it is not so good at inputting keyboard shortcuts which sometimes require finger athletics. Computer rodents are best at drawing shapes and this is where Lexicon comes in. It lets you use the mouse to simulate keyboard characters when you hold down the right mouse button.

You can issue ordinary characters such as A or 7 with or without combinations of Control, Alternate and Shift. You can even simulate the Help key. Lexicon uses a configurable library of patterns. The pattern you draw does not even have to be exactly the same as the one stored! You could create a library covering the whole keyboard, but this is probably not a good idea unless you get a mouse replacement such as Glidepoint. An ingenious little program!



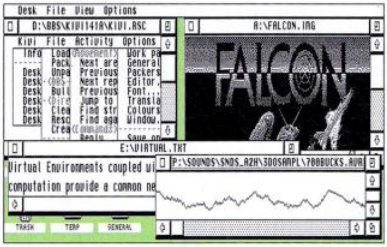
Define your desktop functions to mouse squiggles.

1stGuide

Shareware • all Ataris

A multitude of viewers are available to view a particular kind of file. Those that let you view a variety of file types are quite rare. 1stGuide is a hypertext viewer in the same vein as ST-Guide but goes further. 1stGuide hypertext files are incompatible with the now standard ST-Guide, but its main strength lies in its role as a multi-format file viewer. In addition to text you can view program resource (RSC) files, graphic formats IMG, IFF, JPG, GEM and even MPEG movies! Even more, you can listen to sound files in SAM, SND and AVR formats.

Being an accessory it is easy to use. It isn't supported in the UK though which is probably due to the shareware fee of around £25 pounds.



1stGuide lets you view many files at once.

SET_DEV7 v1.0

The Falcon comes with a high speed serial port known as Device 7. However Device 6, which incidentally doesn't have a hardware port, is used by default. This causes problems with comms software which automatically uses the default device and not the one with the modem connected. SET_DEV7 cures this by setting the default serial device to Device 7 by issuing a Beonmap(7). Run it from the AUTO folder and make those comms programs run a treat!

Playwave v1.0

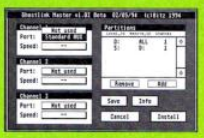
WAV is a common sound file format and there are a plethora of programs which can play these Windows format samples. Playwave is different to the rest. A simple TTP, you just drag and drop the WAV file onto the Playwave icon and it will be played back at the closest sample rate. Being quite processor intensive hiccups are sometimes heard in the audio when playing large files.

Katalog-Maker v1.06

Katalog-Maker makes a catalogue of hypertext files and replaces the ST-Guide bundled STOOL. Easy and simple to use with none of the complexities of STOOL, you don't even need to configure anything. Just click on the Katalog-Maker icon: the hypertext file is created in seconds.

Ghostlink v1.02

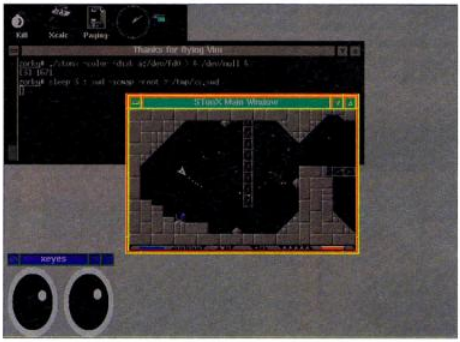
If you have a multimedia PC then you can let your ST use its resources with the help of Ghostlink. You can connect both computers via the serial port, run Ghostlink and then use the PCs floppy and hard drives and even CD ROM drive.



USET2G Release 3

USET2G is a Pure C library which makes using TOS2GEM in your own productions very convenient by letting you make simple C calls. Source code in C for the library is included as well as a makefile for GNU C. Documentation is still in German, but an English version is planned.

The CyberSTrider files



You can play games when emulating with STonX

The speed is pretty impressive, innit!

The CyberSTrider Files

Denesh Bhabuta strides the Internet to bring you news of the latest files for download.

This month seems relatively tame after last months surge of files: probably due to the bout of nice weather. Oasis, the graphical front-end to NOS, has been updated with over 50% of the code being re-written. Email and news are handled differently, multiple users are supported and it is now MagiC compatible.

EasyPGP has been updated yet again, with more support for advanced PGP commands and small bug fixes. BBS users will be happy to hear that Kivi too has gone through a major upgrade and now supports Fidonet mail and fixes bugs. Other updates are CD-Player, now at version 1.3a, and GSZRZ 5.7, a file transfer utility.

Zero-X is a professional music sample editor boasting some powerful features. A demo is available on the 'Net, and the full version is available from System Solutions.

MGIF, an excellent image viewer and processor is nearing release at version 5. The last version was released around two years ago, but it has been worth the wait. With support for many file formats in full colour, the speed with which it loads GIFs is still the fastest around. The full version will be reviewed in a future Public Arena.

And finally, STonX, a freeware ST emulator for UNIX and X Windows has arrived. ST programs have been sighted on Sun, Silicon Graphics workstations, and even Linux PCs!

Denesh Bhabuta
(dbhabuta@cix.compulink.co.uk)

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Switch

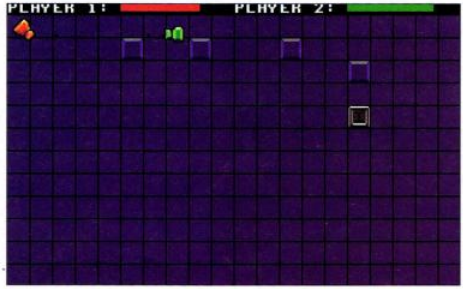
Merlin • £2.50 • Falcon (RGB) only

Switch is a Falcon-only puzzler that will re-instill your faith in shareware games. The object of the exercise is to escape from a dungeon by working your way through a number of tiled rooms. One way tiles and other obstacles need to be negotiated with the help of switches and sometimes you need to work out the whole level before you even move from the starting position. Needless to say, time is of the essence – hang about too long and you're dead meat! At least you can jump back to completed levels without too much fuss though.

The presentation slips beautifully into place behind the just-one-more-go gameplay. You can expect overscanned graphics and a a truly brilliant soundtrack; both add to the effect of the detailed levels and Manga inspired backgrounds. Switch may lack the technical sophistication of some Falcon games, but it looks terrific and is tremendous fun to play – tell me you expect more than that...

Classy backdrops and stylish presentation ooze from Switch's every pore – check out the music...

The aim is to reach the exit — you'll need to be quick and clever with the switches to achieve that goal.



Power-ups are a regular feature on the playfield — be careful not to stray into the line of fire!

Tanx

Floppyshop • £2.00 • Any ST/STe

Video gamers of a certain age will feel instantly at home with Tanx — it's a remake of a classic two-player battle simulator that made its debut on the Atari 2600 many moons ago. I'm sure you know the idea — you simply rotate and drive yourself around the screen, attempting to pick off the other player.

Unlike the original, it takes an awful lot more than a single shot to destroy a tank — energy bars are the order of the day. Added to that, power-up tiles put in regular appearances on the playfield, speeding up, protecting or tweaking your craft in some other way. There's also plenty of shelter for struggling players, although given the momentum of the tanks, it's sometimes hard to stop in the right spot. Needless to say, suitably explosive sound effects back up the experience.

Although the gameplay is relatively simple, Tanx is well presented and surprisingly enjoyable as two-player games go...

Micromagic Darts

Goodman • £1.95 • Any ST/STe

Beer-bellies at the ready, ladies and gentlemen — Micromagic Darts brings all the thrills and spills of Bully's favourite game without the worry of broken ornaments, chipped plaster or dead pets.

The standard "wobbly hand" approach has been thrust aside in favour of an "aim-bar". Getting one of the pointy things in the right spot involves moving the cross hair and then stopping the bar at the appropriate moment. Anybody who has played a golf game such as Leaderboard will be familiar with the idea and it does work well, in that it's pretty difficult to get the dart where you want it.

On the flip side of the coin you do seem to spend much more time watching the bar than the board — the cross hair remains firmly planted on the treble top most of the time. Even so, the game remains fairly enjoyable, if not super-smashing-great...

Move the cross hair and then prod the fire button as the aim-bar slides into the right spot.

One or two player games are on offer and the target is adjustable between 301 or the more traditional 501.

Easy Money

Goodman • £1.95 • Any ST/STe

Fruit machines — millions enjoy playing them and yet everyone knows that you are going to end up putting more money in than you get out. That being the case, wouldn't it just be easier to play a few games on your ST and save a few quid in the process? Enter Easy Money.

You start each game with a fiver and the fruit machine layout is represented perfectly on the screen. The game is punctuated with nudges, holds and gambles, and the jackpot is a tenner, so it's quite easy to walk away with a profit given quick enough reflexes (mine seem to give up at around the £5 gamble mark). Overall, it boasts just as many features as your average fruit machine and is equally enjoyable to play, although, much like the real thing, there's no fear of the ST actually coughing up any money...

Nudges, gambles and holds keep interest alive, but the game does lose something without the jingle of 10p pieces.

You start the game with a fiver — keeping the total above the break-even point is a constant struggle.

A variety scenarios are available and more are provided on the supplied data disk.

Primitive graphics do little to liven up the reasonable gameplay.

Aerial Kombat II

Floppyshop • £3.50 • Any ST/STe

Aerial Kombat turns your ST into an virtual battle zone, the idea being to pick off your opponent while trying to avoid entanglement with stationary objects. There are several different scenarios available, ranging in style from Star Trek at the one end to more realistic Harrier battles at the other. Although the control system is nice and responsive, the ordinance is slightly less impressive — you can only fire one shot at a time; let off a second and the first disappears! Sadly, the weedy sound effects and graphics do little to add to the experience.

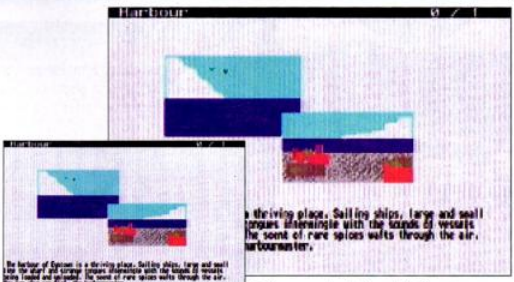
Aerial Kombat is a reasonably competent game, but not the most outstanding example of its genre — in fact, it could be argued that the original Space Duel offered more in terms of gameplay by virtue of its gravitational field. The various backdrops are a nice touch, but if you're after two-player head-to-head action, Tanx is the better bet.

Craghaven

LAPD • £2.50 • Any ST/STe

Craghaven is a fantasy text adventure that casts you in the role of a young traveller seeking his fortune. The game begins as you find yourself walking onto the harbour in Eyntown — as ever, the plot unfolds as you progress through the game. One of the nicer aspects of Craghaven is the character interaction; you really do need to talk to other people to find out what's going on, and fortunately most are fairly forthcoming.

The all-important grammar appears to be quite good too, but unfortunately the same cannot be said of the graphics — "chronic" is the word that springs to mind. It's hard to judge the difficulty level without playing for several hours, but initial impressions suggest that it lands firmly in the accessible end of the market. If you feel you can still cope with a text interface — and believe me, the knack returns quickly — you will certainly enjoy Craghaven



Character interaction adds to the gameplay — it's a pity the parser can't understand "look pal, give me the scroll or your dead!"

Good grammar and a nicely moulded plot go a long way towards making up for Craghaven's desperately dull graphics.

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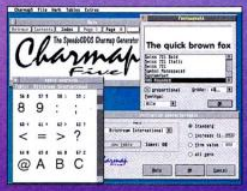

Charmap5

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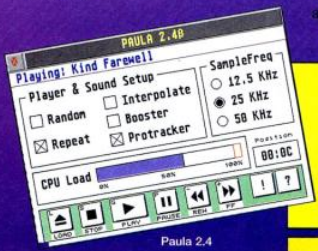

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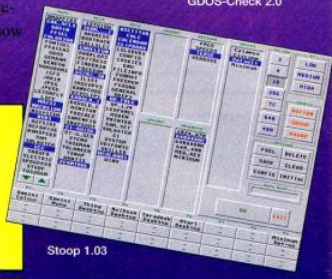

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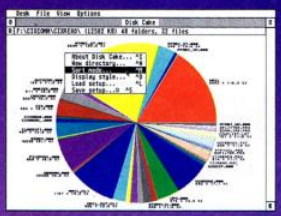

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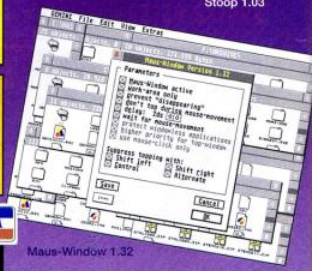
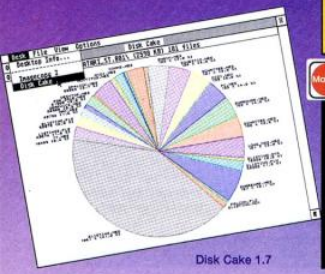


Maus-Window 1.32



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Clubbin'

Atari computers are the first home of one of the major software applications for personal computers. Harry Sideras takes a look at the support group Club Cubase UK...

If there is one aspect of Atari computers that will ensure its continued use for many years to come it's MIDI sequencing - no other platform can deliver the accuracy of timing, even at a profesional level. If there is one killer application that allows a musician to successfully transfer his talent into the digital domain it's Cubase and the programs that support and enhance it.

Is this just hype, contrived to comfort a captive audience of Atarians? Not according to Ofir Gal. Gal was co-founder of Club Cubase UK (CCUK) along with Vic Lennard, who was previously the Director of the UK MIDI Association long before his time as editor of Atari magazines.

Ofir was already writing for Club Cubase Toronto's magazine when he approached Vic to form a UK branch some three years ago. The best part of a year was spent setting up, forming the necessary relationships with Cubase publishers Steinberg and UK distributors Harman Audio.

Joining up

Membership of CCUK is strictly confined to registered users of one of the incarnations of Cubase, whether it be the entry level Cubase Lite or the full Cubase Audio Falcon. To join you need to obtain a membership application form direct from Harman Audio.

What this gets you is the club magazine, Basique, which is a 20 page bi-monthly publication and access to Club Cubase Direct, a way for members to order Steinberg and other Cubase related products, including upgrades, at a discount. They also distribute mixer maps at PD prices.

As a registered Cubase user a helpline is already available to you, run by Harman, so CCUK doesn't attempt to duplicate this service. Instead, the emphasis is on the reviews, tutorials, hints and tips and interviews that appear in the magazine.

Basique

Issue #12
July / August 1995

THE BI-MONTHLY MAGAZINE OF Club Cubase UK

PC SCORES TOO!

Cubase Score 2.0 soon to be released for Windows...

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The club's professional magazine.

The famous Cubase music package.

It should be understood that Cubase appears on both PC and Macintosh platforms and the membership of over 1,000 is evenly split between Atari and non-Atari users, so the articles in Basique regularly refer to versions not always available to Atarians, but to see this as a disadvantage is to miss the point. CCUK isn't about computer users using Cubase, it's about *musicians* using Cubase and everything that's relevant to helping them improve the output of their sequencing.

On the record

The Basique magazine is very professional in its presentation, as is the content and the emphasis is firmly on the practical side of things. Steinberg make available answers to typical questions that they receive on their own helpline and Kevin Earley from the Harman helpline also contributes answers and articles on more specific issues.

Whatever standard of musician you are there's no guarantee that you're equally proficient with the software itself. So, recent articles have included basics of how to customise your setup and general working practises with Cubase, learning how to make your sequences sound like real instruments and how to organise your score notation so that it's practical to read for players of each instrument.

Basique doesn't limit itself to Cubase entirely. There are regular reviews of hardware add-ons, sample editors and issues related to getting your MIDI and recording equipment under your control. All this plus interviews with personalities involved in MIDI recording and how they put their work together.

Whether you use Cubase for your own pleasure, with a school band or as a professional or semi-pro musician, there's enough advice on hand at Club Cubase to make your recordings significantly more polished and fluent. Now, isn't that what it's all about?

Making contact

To join Club Cubase UK you must be a registered user of Cubase. To ensure this an application form is only available from Harman Audio on 0181 207 5050. A cheque for £14 needs to accompany the completed application when returned to CCUK.

Feedback

Feedback is always welcome, either at the magazine address or via email to sidcelery@cix.compulink.co.uk. Online, you can join the NeST support echo N.SUP.ATARI_WORLD at any NeST BBS or on CIX join the atari.world conference.

Correction

In the LACE report in issue 3 I implied that the club disk was issued on a monthly basis - this is incorrect. The newsletter appears monthly, but the disk is issued once a year.

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Q&A

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Atari World Q&A, Specialist Magazines Ltd, Unit 3 Green Farm, Abbots Ripton, Huntingdon, Cambridge PE17 2PF

or e-mail them to:

atari_world@cix.compulink.co.uk

While every effort will be made to answer your question within the pages of either Atari World or Atari Pro, please note that individual correspondence cannot be entered into.

The DMA test

TIP

In the late 1980s Atari produced a number of STe computers with a faulty DMA chip in them. Despite best assurances from Atari that the problem was small and that most had been replaced, there are still a number of STe machines with a DMA timebomb inside them.

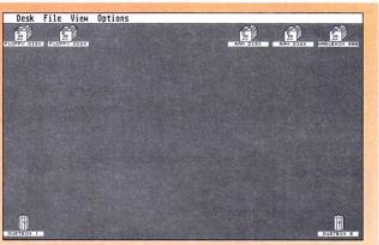
The problems start when the DMA gets hot. This can be caused by two main factors, either hot weather or increased activity inside the computer. Increased activity can be anything from fitting an upgrade; anything such as a memory upgrade or a PC emulator to using new peripherals, a faster hard drive or external floppy.

The result? Spurious data corruption. Your STe DMA will start writing rubbish, soon your floppy disks will be corrupt and your data on your hard drive gone forever.

How do you tell if you have the problem before experiencing the grief? The only way is to open your STe and check the number on the DMA chip, if it is a C398739-001 then you are OK. CO25913 and you have problems...

This problem is only known in 520 and 1040 STe computers and no other STs or Mega STes.

Shaun Peel, Sunderland



Two can play...

TIP

Don't you just hate it when you have to go from one end of the screen to the other just to delete something in your one and only trashcan. Have you ever wondered how you could have more than one? Then wonder no more. If you are capable of editing your DESKTOP.INF file with a text editor, then you too can have two to use - if you follow what I mean.

Find the line with details of your original trashcan and insert a new line above it. Copy the existing line for the trashcan. Change the first two zeros to read 07 and name the bin to differentiate it from the first. I used the rather imaginative Dustbin 2. Quite fetching don't you think? Then save. The next time you reboot you should have access to two trashcans.

You can of course edit the name to something more in line with your personality - shredder, Die Hard I, Die Hard II, or whatever. As usual you get no guarantees that this will not screw up your disks or files. I can however assure you that I have used two trashcans for a number of years without any mishap whatsoever.

I have never used the recoverable trashcan CPX that I have read about, but it may be possible to make one of your trashcans recoverable and the other permanent. Anyone out there willing to give it a go?

Happy computing.

Charlie Hunter

Which drive?

hardware

Following your article on hard drives in issue 3 I have finally been persuaded that it is something that I really need. I started with Timeworks on the ST Review coverdisk and moved up to Timeworks 2 and I now see that Timeworks 2.04 has arrived and needs a hard drive.

Should I go for a drive such as the Mini-S/Datapulse Micra/Gasteiner etc, the latest ZIP 100 from HiSoft or wait for the ultra latest one you mention that uses a high density drive that can contain up to 100 Mbs. Or is there yet another alternative?

My current set up is an Atari 1040 STe, TOS 1.62, 2 Mbs RAM, Zydec External drive (720K), a Microvitec multisync monitor, Seikosha SP 1900+ printer, Naksha Scanner "bundle" plus other items. The main usage is word processing, DTP and accounts. We are starting on MIDI soon.

The prices are coming down fast, eg Datapulse Micra 353Mb (page 13) £180. Their ICD Link however is £89.99 whereas the ICD Link from Systems Solutions appears to be around £40. Are you committed to buying the Link or whatever from the same company? Further which is the best system to use? Do they have the ability to "chain" other items eg scanner etc..?!

T C J Spencer, Devon

So you are ready to take the plunge - I'm sure this will be a purchase you will not regret. Your STe should work well with a hard drive. Since it has TOS 1.62 it is unlikely to have a faulty DMA (See tip).

As to when to take the plunge, well you could wait forever. Hard drive prices have come down a lot so now is probably a good time to buy. Zip drives have started to be advertised but availability is poor - we are still waiting for one to review. Technically

and for the price they look very nice but it is still to early to tell whether they are another Betamax or not.

Whilst you can mix and match from different suppliers, I wouldn't. SCSI drives are notorious for problems in getting them set up correctly, but once they work they are very reliable. I'd buy the whole lot from one company, then you know who's to blame if it does not work.

Finally, you are right; the connections on the back of the drive are important. The drive should have a SCSI in and SCSI out connector. This means you can later go on to add other devices such as a CD ROM by 'daisy chaining' them.

Maurice Collins

Eagle eyed

Why does the Toplink cost so much for the ST's hard drive connection? I've looked in the RS components catalogue to find the 19 pin D-plug but to no avail.

Is the Eagle really worth £2,000? I was thinking of updating from STe to Eagle. But at that price, no chance. It would have to come down in price heavily before I consider it. Yes, I am aware of R & D and production costs, but I could get a PC for less that that. Maybe I'll just upgrade to TOS 2.06, it's cheaper.

Plenty of congrats go to all that work for Atari World for such an informative magazine, more so than ST Review and definitely more so that ST Format. A short message to Future Publishing, keep your hands off Atari World. I was not happy when I found out that ST Format was incorporating ST Review. I just simply refuse to buy a copy of ST Format nowadays.

Sometimes you have to be critical.

R Mclellan, Powys

A Top Link, ICD Link and other external host adaptors might seem to cost a lot, but since there is competition from a number of vendors one can only assume that they cost quite a bit to make. The point is that they are not just cables. An Atari ST has its own system of talking to other peripherals via its DMA port called ACSI. This was implemented by Atari before the SCSI specification was agreed.

Now SCSI is one of the main standards for hard drives. It's very like Atari's own ACSI and so has become the standard on the ST. Inside a host adaptor, such as a Top Link, sits a circuit board with some logic to translate ACSI into SCSI; so enabling the Atari to access a SCSI hard drive. If only it were a simple cable that you required!

The difference between upgrading to TOS 2.06 and an Eagle is a bit like choosing between converting your Mini to unleaded petrol or buying a Rolls Royce! As to the Eagle, well if it were freely available in quantity and proven to work well then it would be worth discussing the £2,000 price tag. Until then it's perhaps better to look at available alternatives. The Falcon looks a much better bet; and it's got a DSP. In terms of future products I'd expect developments on Falcon accelerators more than on computers like the Eagle.

And thanks for your other comments; Atari World is definitely not up for sale!

Maurice Collins

Speedy answer

Many thanks indeed for Timeworks 2. Having used the program for some years on a PC (spit) it is like meeting an old friend.

I am interested in Version 2.04 of the program but I am loath to purchase SpeedoGDOS 4 given that I already own NVDI 3 which does a great job with Speedo fonts.

Is it really only possible to use SpeedoGDOS 4? If it is possible to use NVDI 3 (or indeed SpeedoGDOS 5) then would you be willing to sell a copy of Timeworks 2.04 on its own? If so please could you quote me a price? I enclose a stamped, addressed envelope for your reply.

John Powell, Salford

A Since we first started working with Timeworks 2.04 we have made substantial progress and now have it working with Speedo 5. I see no reason why it should not also work with NVDI 3. Try giving our order hotline a ring, by the time you read this they should have a definitive answer.

Andrew Wright

X marks the spot

The inclusion of Timeworks 2 on the issue four reader disks has caused me a minor headache. I own a 170 meg hard drive, which has accepted Timeworks perfectly, thanks to your step by step guide. The problem has arisen because of the placing of GDOS in an Auto folder on my boot partition. I have no other GDOS applications installed, but I use a database (Habaview) on an almost daily basis. This flatly refuses to co-operate whilst GDOS is resident, denying access to any stored files. If I delete the Auto folder and reboot, Habaview returns to normal.

Can I disable GDOS once it is installed? Can I install GDOS, when needed, from a floppy. Your help would be greatly appreciated.

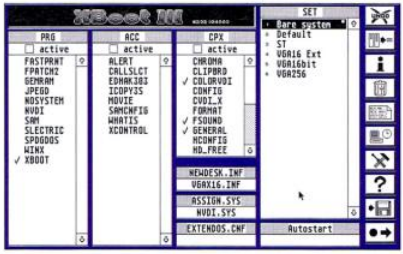
Nigel Nattrass, Nottingham

A Let's understand what is going on here. When you first start your ST it boots from your hard disk. This process of booting includes a process where your ST looks for a folder called Auto in the root directory of partition C on your hard disk. If it finds the Auto folder then it looks inside to see if it can find any files with the extension *.PRG. If it finds them it tries to run them automatically.

Timeworks needs GDOS to be in the Auto folder when you boot the computer to run and Habaview (a fine program that I still use too, incidentally) clearly objects to GDOS being in the Auto folder. There are a number of solutions to your problems.

You don't say which hard disk utilities you are using with your ST. AHDI, ICD Utilities or whatever. Some utilities have a key combination to hold down when you boot your computer so that the computer ignores the Auto folder when booting. If this is the case with your utilities then hold down these keys when you boot and want to use Habaview.

You could turn GDOS off by renaming it to say GDOS.PRX. Then when you reboot the computer you are set to run Habaview. When you want to run Timeworks then just rename it back to GDOS.PRG.



XBoot is one of those utilities I couldn't do without.

However, the best solution is probably to get a boot manager. A boot manager is a special utility that will do the switching on and off of GDOS automatically for you, and much more like disabling some accessories, allowing you to use different desktops and so on. Check out this month's reader disk for the popular BootXS or consider the excellent XBoot 3 which is published by HiSoft.

Andrew Wright

Game drain

I have two 1040 STes. One is set up for desktop publishing, the other I bought about two years ago for games and a back up. The kids borrowed it for their bedroom but they now have a Mega bore, so I set up the other STe in my bedroom at another desk (boy was the wife overjoyed).

When I tried to play some games a number of them would not load, the drive would whirr, as usual, and then the desk top appeared and that was it. When I double clicked on the A drive it would just repeat the process. I accessed the desk files through a text editor, the file names as far as I could make out where just a jumble of something like machine code. When I clicked on the files they just showed empty, but then if there were no files of that identity originally written on the disk then I would not get anything on screen.

I have had a couple of problems with this drive, sometimes I would have to re insert the disk for it to work properly. When I asked the kids about it they said some games would load for them and some would not, pity they never told me because I have lost a lot of good games like Microprose Golf, Cannon Fodder and Zool so if there is

anything you can suggest to help it would be very much appreciated. By the way the magazine is great, full of useful information.

Mike Hairless, Wirral

A Two major things could be going wrong here, either a virus problem or a faulty DMA. Also some concern must also go toward the possibility of a faulty disk drive which just might be the cause of some of your grief, but I doubt it.

Games often work in mysterious ways. They don't often run from the desktop as normal productivity software - instead they have special boot sectors which means you need to start the game from an original disk. It sounds like these boot sectors are being corrupted on your games.

At one stage in the late 1980s, Atari produced a bad batch of STe's with a faulty DMA chip. This could be part of your problem. Secondly you could have a virus in your system. Viruses normally set themselves up by writing to the boot sector of a disk. In the case of a game this is also where vital information is stored to enable the game to boot. I think it's time for you to spend £12.99 on the latest version of UVK (Ultimate Virus Killer). This will not only detect a virus if that is indeed the problem, it will also mend some of your games by reinstalling the correct boot sector. I only hope you have not reformated or thrown all those disks away! Oh and by the way, my sympathies to the wife!

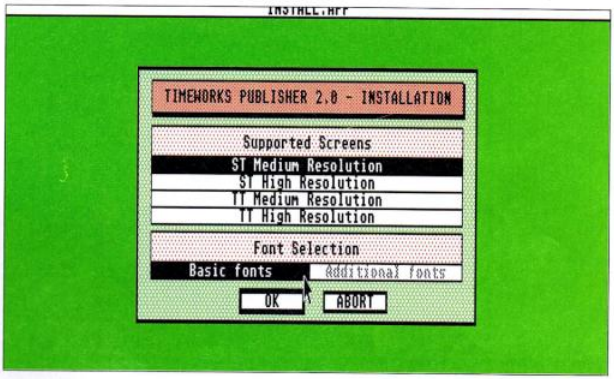
Maurice Collins

Oops!

Q Many thanks for your article on installing Timeworks 2, everything was very clear and the installation went very well except for one small point. I am therefore sending you a few details of the problem, in the hope that you may be able to help.

I have an STe 520 upgraded to 4 megabytes with a single floppy drive. The disks arrived yesterday, and I immediately made back ups using AWBAKUP.TOS, and then started installation using your article.

Everything went fine until I came to Fig 4, at this point I selected HI-RES, without trouble, but was unable to select "Additional Fonts". After a short pause to worry, I carried on with the installation and everything else seemed to work perfectly, but I



The box on the right is greyed out because of the drive setup, not the RAM. Oops.

am not sure how many fonts I should or could have.

I am enclosing a screen print of the "Fig 4" stage, and the Timeworks 2 Test Card, in case these contain any clues that may be of help. I am naturally wondering if there is a slight fault on the Master Disk 1. They were "write protected" immediately on removal of the package. Hoping you can suggest some simple remedy.

T J Brown, N Yorks

A Gulp. This is down to me and I apologise for the mistake. Sheer incompetence...

In the issue 4 tutorial I said that the Timeworks installation program would allow you to install the full set of fonts if you had more than 1Mb of RAM. I was wrong - it will only let you install the full set if you have either two floppy disks or a hard drive. It's disk space and not RAM that's important. Sorry, Mr Brown (and anyone else who was confused).

Andrew Wright

Upgrade downgrade

Q I have a 520 STe recently upgraded to TOS 2.06 and 4 meg of memory. Before the TOS change I used the US Gold version of Scrabble and I could play the game alright provided I did not use the options choice. If I did it would bomb out and crash, even though the program is sold as being ST/STe compatible.

Since the change to TOS 2.06 I cannot get the disk to read and a message appears telling me "Data on the disk in drive "A" may be damaged".

I would be grateful if you can offer any solutions as I do enjoy the occasional game.

R Woodward, Nottingham

A Interesting. Most compatibility problems with TOS occur between 1.04 and 1.6, between an STFM and an STe. Very little will not run on TOS 2.06 that runs on a standard STe with 1.6x. Just maybe it's something to do with the copy protection upset by timing, and maybe it's fixed by the following.

TOS 2.06 on its own will change the seek rate on the floppy drive to 6 milliseconds rather than the normal 3 milliseconds under earlier TOS versions. Using the patch program SEEKUP on this month's reader disk could well solve the problem. It will also make the drive quieter with no loss in performance.

Maurice Collins

Cumana commotion

Q I recently bought a second hand Cumana disk drive and was shown it working on a 1040 STFM perfectly, but when I got home and plugged it into my 4 Meg STE the computer will not read drive B and asks for disk B to be inserted into drive A. So thinking there must be a fault with my Atari I tried it on my brother's 520 STFM and it worked. Just to be sure I ran a couple of STE owning friends and asked to try it on their computers. The STes would not see the drive, but it was seen by their spare 1040STFM!

When connected to an STe the drive whirrs at the same time as the internal one but is not read in any way. This may seem a silly question but is there such a thing as an STFM only drive? It is hard to believe the STEs I tried all had identical faults on the WD1772 chip.

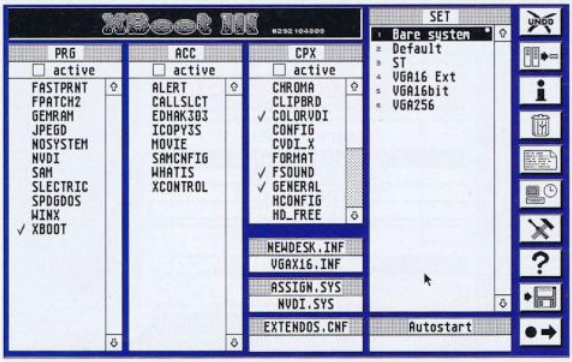
I would be most grateful if you have any answers or ideas upon this problem. The drive in question is Cumana CSA 354 serial no 23844 and dated 26/10/89. My TOS version is 1.62.

Andy Stapleton, Derbyshire

A Yes, it's perfectly possible to have a Cumana drive that seems to be STFM only. Cumana had problems with STes when they first came out and were forced to do a hardware modification. Since your Cumana drive is dated 10/89 that puts it in the right era. (By the way, thanks for the detailed info - you have no idea how much easier it is to answer questions when they are described with such clarity as yours.) Cumana never released details of the modification and now they are no longer producing ST hardware I can't get the details from them as to what modification to make.

The problem actually relates to the internal disk drive used inside the STe. The problems tend to be caused with certain Epson mechanisms. Note this is the mechanism inside the STe, not the mechanism in the Cumana drive as you would logically expect!

If the drive in your brothers



machine is a double density try swapping his for yours when he's next out of the house; that might fix it. Failing that, the modification Cumana made was to fit a resistor inside the drive case on the data lead to the drive. If anyone has a later model Cumana and can write to me telling me the details of any mod that has been made to their Cumana drive, including the value of the resistor, then I'm sure they will win a tenner for the tip!

Failing that, fitting a new, non-Epson internal drive should, I think, fix the problem!

Maurice Collins

Macquestions

Firstly, let me say just how much I enjoy reading *Atari World*. Secondly, could you answer some questions for me.

1. I have a 4Mb 520 STFM and TOS 2.06, HD and colour monitor; is there a program available to animate Spectrum 512 images in the way Cyber Paint does?
2. Which do you think would run more ST applications, a Mac 630 running MagicMac or a 486 with Gemulator? And is there any way of running Apex Media or Neon 3D under these two emulators?
3. Also regarding the Mac, can I develop GEM applications using MagicMac and HiSoft languages?
4. Finally, how many colours and what resolutions are available to a Performa 630 and 15" multisync monitor?

Steve Lawson, Cumbria

A Glad someone appreciates us!

1 Not that we know of.

2 Marginal in terms of compatibility but a Mac using a Motorola processor with MagicMac will certainly run them faster. The Falcon is blessed with a DSP chip. This little beast is not present in either a Mac or PC. Hence applications like Apex that use it are limited to a Falcon. Incidentally; it is applications like Apex and CuBase Audio that show just how special the Falcon really is. To achieve anything similar on another system costs very serious amounts of money. If you are going to upgrade your machine the Falcon should be on your list for consideration alongside the PC and Mac.

As far as Neon is concerned it is not yet even scheduled for UK release according to Compo UK. I wish they'd get their fingers out, though, as we do need this kind of software in English; it's another Atari classic that UK users are being deprived of!

3 Yes

4 Without NVDI for MagicMac you can get a screen resolutions up to 832 x 624 in 256 colours. Add NVDI for MagicMAC and you get 640 by 480 in what the Mac quaintly calls "thousands of colours". Add extra VRAM to the Performa 630 and you will also get 640 by 480 in "millions of colours".

Maurice Collins

Paint pet

Between us (me and the kids) we have an STe, TT and a couple of Jags. I have an HP (serial only) Colour Paintjet printer attached to the TT which works OK with Pagestream, some art programs, and the desktop sometimes when using Xon/Xoff.

I don't believe I could get it to work with Calamus SL but I would like to be able to use it with SpeedoGDOS version 4 or maybe the latest NVDI. Any ideas? Am I best using Xon\Xoff or RTS and which RS232 port should I stick to. I sometimes use the HSMOD4 patch, although it seems to interfere with printing. Any other programs that support serial Paintjets? Other drivers that might work? Paintjet is mainly level 1 PCL with bits of level 2 and 3.

And is there anything better than GBELL out there for producing sounds? I can't seem to get it to work.

Mr Waddington, Plymouth

A The Paintjet is an odd beast, most notably because it works at a completely non standard resolution and is hence not compatible with any other printer. It was also never particularly popular with Atari owners. Not only that, it is now quite obsolete so much of the newer software authors forget about it completely. However Speedo 4 and 5 both have drivers so all Speedo compatible software should work OK. Check out this months Atari Pro for more on the TT serial port.

With regard to sound, the German firm Maxon have just the product for you! Crazy Sounds 2 is probably the most fun you can have sitting at an ST despite reports to the contrary in Atari World issue 3! It's solid, costs about £60 and is not available in the UK. Call Maxon direct to order on 010 49 6196 481811 and say *Atari World* sent you - they speak good English.

Maurice Collins

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PROUDLY PRESENTS...

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